

Ephemerides A Bochart
Diurnal Speculum,

CONTAINING

I. A plain and easie Method to find out
those things that are most useful to be known
Yearly : And may serve as

An Almanack for Thirty Years ;

AND

Many other things suitable to the Matter, &c.

II. An Explanation of Weights, Money, and
Measures, both Scriptural and Usual, with
sundry Tables depending thereon, &c.

III. Some Remarks on *England* ; or a Brief Ac-
count of every County, with the Names, and
Days of the Markets, and the Chief Commo-
dities therein, &c.

The whole consisting of Great Variety, explain-
ed by divers Examples ; the like in all parti-
culars not extant ; as by the Contents does
more at large appear.

Collected by J. B.

Amos 5, 8. *Seek him that maketh the Seven Stars, and
Orion ; that calleth for the Waters of the Sea, and
poureth them out upon the face of the Earth ; the
Lord is his Name.*

London, Printed and Sold by T. Sowle, in *White-
Hart-Cours* in *Gracious-Street* ; and also Sold
by J. Peacock, at the *George* in *Great East-
cheap*. 1696.

rare

128

PASQUIN

176
11/10/10

coll.

(51)

36

27 July of 1870
George and Son
Street East

D^r returned one to Mr
Richardson.

31	Jan ^y	1	1	March
28	Feb ^y	2	2	April
31	March	3	3	May
30	April	4	4	June
31	May	5	5	July
30	June	6	6	Aug
31	July	7	7	Sep ^r
31	Aug	8	8	Oct ^r
30	Sep ^r	9	9	Nov ^r
31	Oct ^r	10	10	Dec ^r
30	Nov ^r	11	11	Jan ^y
31	Dec ^r	12	12	Feb ^y

365

15 March 1854 day
 24 June St John Baptist
 29 Sept St Michael
 21 Dec St Thomas

From 25 March to 4th end 6
 April 30
 May 31
 June 24
 12th 91

From 24 June to 4th end 6
 July 31
 Aug 31
 Sept 29
 22th 97

From 29 Sept to 4th end 1
 Oct 31
 Nov 30
 Dec 21
 32th 83

From 21 Dec to the end 10
 Jan 7 31
 Feb 14 28
 March 25
 42th 94



Quarter

12th 91... 92
 22th 97... 92
 32th 83... 91
 42th 94... 90

365 Days

Northern Signs of
the Zodiac.

1 The Ram	Spring Summer Autumn Winter	Mar 10
2 The Bull		Apr 9
3 The Twins		May 11
4 The Crab		June 10
5 The Lion		July 10
6 The Virgin		Aug 12
7 The Balance		Sept 13
8 The Scorpion		Oct 10
9 The Archer		Nov 10
10 The Goat		Dec 11
11 The water bearer		Jan 10
12 The Fishes		Feb 9

In 1752 the 2^d of Sep^r
was dropped and
the next day being
the 3^d was called the
14th when y^e New Style
began.

x 531. a 39







TO THE READER.

Friendly Reader,

I Have here exposed this small Manual to publick view, that thereby I might discover some things Useful for the Vulgar, and Injurious to none; for I have chiefly Collected it from such that are accounted Approved Authors, (although not without several of my own Experiments) and I have put it into such a Method, that (I suppose) may suit an ordinary Capacity, not knowing the like particularly extant; for herein are inserted divers and sundry Tables, which, with the Directions there-to belonging, may very well supply the Use of a Common Annual Almanack for several succeeding Years, and in that manner that is not commonly seen, for herein are the Months called as in the Scripture, and placed in that order, as near as our Account doth agree therewith, viz. the first

To the Reader.

Month, now called March, standing first, the second Month called April, &c. unto the twelfth Month called February, standing last; and in like manner here, are the Days of the Week called, (where occasion is to mention them) as they were first ordained, viz. the first Day, the second Day, &c. unto the seventh Day, being the Jews Sabbath, with several Citations out of Scripture in their proper places for proof thereof, which so calling them would be a far greater Ornament to Christian Religion to be found in the practice of, than to call the Names of them after the Old Heathen Romans and Saxons, that gave them their Names in Honour to their Gods, as in this Book is more fully demonstrated; for it is a thing worthy of blame, that the Heathen Gods should have such a Memorial amongst Professors of Christianity, or such as would be esteemed the People of the Lord, which according to Exod. 23. 13, Jos. 23. 7. ought not to be; for the Lord promised he would cut off such Names, Zech. 13. 1. Then let none plead Custom to uphold them, as some did, Jer. 44. 17. for an evil Custom ought not to be upheld, but abolished, Zech. 1. 4. Hen. Jessey in his Scripture Calendar saith, That

To the Reader.

That about 300 Years after Christ, it was ordained by *Silvester* the first, and concluded by *Constantine*, that those Heathenish Names should be Extirpated, and by the Best Christians was observed some Hundreds of Years afterwards; and indeed this being not the least Motive that induced me to a Publication hereof.

But I have a little exceeded my intended Bounds, by inserting sundry Convenient and Necessary Tables, which are both pleasant and delightful, consisting of divers Matters relating to the Affairs of Humane Life, as many sorts of Weights, and Measures, Dry and Liquid, in length and superficial, with Tables depending thereon; and several other things, the particulars of which are expressed in the following Contents Alphabetically.

So what I have done here, is not intended to Instruct the Skilful Mathematician, my Capacity being too weak, but rather shall be willing to submit my self, if any Error appear to such, and unknown to me.

So one thing, Reader, I desire thee to observe, in several places of this Book, where any thing hinted at seemeth not clearly to me, I have used to say, such a

To the Reader.

thing is thought, or supposed, or saith to be so; for Authors sometimes differ as to time, place, number, distance, &c. but comparing one with another, I have taken the greater part that agree, to come nearest to the Truth, if I do not know, by my own Experience, to the contrary. But if I escape the Calumny of some that seek for a fault, and rejoice thereat, I shall have better Fortune than some more worthy than myself have had.

I suppose I need not say much to convince the generality of People, that the Stars and Planets have an influence upon the Elementary part of the World, since daily Experience, as well as Scripture Testimony, witness as much; for the Lord said unto Job, Canst thou bind the sweet Influences of the Pleiades? which is that Constellation called the Seven Stars; which question imports, that they have an influence, and beyond Man's power to stop it: For when the Sun comes to be in or near a Conjunction with them, we have usually pleasant Showers; so if the fixed Stars have an influence at that vast distance as they are from the Earth, the Planets, or wandering Stars, being abundant nearer, may have a far greater influence on the same, thereby
causing

To the Reader.

causing Heat, Cold, Moisture, Dryness, and Generation, Production, Corruption, &c. on Terrestrial Bodies, Deut. 33. 14. for by the Fourth Days Work of the Creation, it appears they were made for a four-fold end, viz. 1. To give Light. 2. To Distinguish Seasons. 3. To Rule. 4. For Signs; therefore not without Power and Significations; but for their having power over the Will or Mind of Man, as to enforce or compel the same to any Action, I do not believe; therefore let none think, or say, It is my Fortune, and I cannot help it, or the like, as some will, when any thing Accidentally or Providentially happeneth to them, or are overcome with some Extream, but above all, look unto the Lord, whose doings it is to lift up, and bring low, 1 Sam. 2. 7. Job 36. 22. Prov. 8. and also often permits Afflictions and Tribulations to come on Man for his good, Psal. 22. 24. and 119. 67. 71. 75. Isa. 26. 9. 16. and so his Secrets are not to be always known by Astral Influence, for Paul saith with Admiration, How unsearchable are his Judgments, and his Ways past finding out! Rom. 11. 3. although his Secrets are with those that fear him, Ps. 25.

John Bockett.

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The FIRST MONTH,

Called *March*, from *Mars*, called God of Battel, or War, by the Heathen feigned Son of *June*, and Father of *Romulus*, from whom *Rome* hath its Name. It hath xxxi days.

Jan.

M	W	☾	☉	P.		N.S.
D.	D.	N.	D.	☾	<i>Fish & Ram</i>	
1	d	8	1	22	☉ rise 6 ho. 24 min.	B 11
2	e	16	18	23	7 Stars set 12 ni.	a 12
3	f			24	Len. day 11 ho. 36 min.	b 13
4	G	5	13	25	Day break 4 ho. 10 m.	c 14
5	a	13	5	26	☉ set 5 ho. 48 min.	d 15
6	b			27	☉ rise 6 ho. 11 min.	e 16
7	c	2	11	28	☉ set 5 ho. 52 min.	f 17
8	d			29	Len. day 11 ho. 54 min.	G 18
9	e	10	6	30	7 Stars set 11 ho. 43 min.	a 19
10	f	18	10	7	Day break 4 ho. and	b 20
11	G			2	Day and Night equal.	c 21
12	a	7	5	3	Len. day 12 ho. 6 min.	d 22
13	b	15	6	4	Day break 3 ho. 53 min.	e 23
14	c			5	7 Stars set 11 ho. 36 min	f 24
15	d	4	6	6	☉ set 6 ho. 10 min.	G 25
16	e			7	☉ rise 5 ho. 51 min.	a 26
17	f	12	7	7	7 Stars set 11 ho. 30 min.	b 27
18	G			8	☉ set 6 ho. 16 min.	c 28
19	a	1	8	9	Day break 3 ho. 43 min.	d 29
20	b	9	20	10	Len. day 12 ho. 36 min.	e 30
21	c	17	0	11	☉ rise 5 ho. 40 min.	f 31
22	d	6	12	12	7 Stars set 11 ho. 5 min.	G 2m
23	e	14	23	13	☉ set 6 ho. 25 min.	a 2
24	f			14	Day break 3 ho. 34 min.	b 3
25	G			15	<i>Annunciation V. M.</i>	c 4
26	a	3	4	16	7 Stars set 10 ho. 15 min.	d 5
27	b			17	☉ rise 5 ho. 28 min.	e 6
28	c	11	10	18	Len. day 13 ho.	f 7
29	d	19	11	19	7 Stars set 10 ho. 35 min.	G 8
30	e			20	Day break 3 ho. 15 min.	a 9
31	f	8	9	21	☉ set 6 ho. 38 min.	b 10

28 29 30 2:4 m: 35

The SECOND MONTH,

Called *April*, from *Aphroditus* or *Venus*, called the Goddess of Love, (but rather of Lust) feigned to be engendred in the Froth of the Sea, filthily, by means of *Saturn*. It hath xxx days.

MW	5	⊙P.	<i>Feb.</i>	N.S.
D.D.	N	D	<i>Ram</i>	

1	h	16	6	227 Stars set 10 ho. 23 min.	c	11
2	a			23 ☉ rise 5 ho. 20 min.	d	12
3	b	5	1	24 Len. day 13 ho. 30 min.	e	13
4	c	13	0	25 Day break 2 ho. 50 min.	f	14
5	d			26 ☉ set 6 ho. 48 min.	g	15
6	e	2	4	27 ☉ rise 5 ho. 10 min.	a	16
7	f	10	17	28 7 Stars set 10 ho. 0 min.	b	17
8	g			29 ☉ set 6 ho. 54 min.	c	18
9	a	18	0	30 Day break 2 ho. 36 min.	d	19
10	b	7	13	8 Len. day 14 hours.	e	20
11	c	15	20	27 Stars set 9 ho. 45 min.	f	21
12	d			3 ☉ set 7 ho. 2 min.	g	22
13	e	4	22	4 ☉ rise 4 ho. 57 min.	a	23
14	f			5 Day break 2 ho. 30 min.	b	24
15	g	12	23	6 Len. day 14 ho. 12 min.	c	25
16	a			7 ☉ rise 4 ho. 50 min.	d	26
17	b	1	20	8 ☉ set 7 ho. 11 min.	e	27
18	c	17	30	9 Day break 2 ho. 12 min.	f	28
19	d	9	7	10 7 Stars set 9 ho. 16 min.	g	29
20	e			11 Len. day 14 ho. 36 min.	a	30
21	f	6	0	12 ☉ rise 4 ho. 41 min.	b	3m
22	g	14	8	13 ☉ set 7 ho. 20 min.	c	2
23	a			14 <i>George</i> .	d	3
24	b	3	22	15 7 Stars set 8 ho. 54 min.	e	4
25	c			15 <i>Mark</i> , Evangelist.	f	5
26	d	11	14	16 ☉ rise 4 ho. 32 min.	g	6
27	e	19	23	17 ☉ set 7 ho. 29 min.	a	7
28	f			18 Day break 1 ho. 50 min.	b	8
29	g	8	13	19 Len. day 15 hours.	c	9
30	a			20 7 Stars set 8 ho. 30 min.	d	10

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The THIRD MONTH,

Called *May*, from *Maja* a Heathen Roman Goddess, called *Flora*; on the first Day was kept Feasts to *Gloris Flora*, which was afterwards Solemized with Flowers and Green Boughs, stiling that Strumpet the Goddess of Flowers. It hath xxxi days.

M	W	L	O	P	Mar:
D	D	N	D	8	Bill

N.S.

1	b	16	0	21	Philip and Jacob.	e	1
2	c	5	16	22	☉ rise 4 ho. 20 min.	f	12
3	d			23	☉ set 7 ho. 39 min.	g	13
4	e	13	0	24	7 Stars set 8 ho. 14 min.	a	14
5	f	2	18	25	Len. day 15 ho. 24 min.	b	15
6	g			26	☉ rise 4 ho. 18 min.	c	16
7	a	10	6	27	Day break 1 ho.	d	17
8	b	18	10	28	☉ set 7 ho. 48 min.	e	18
9	c	7	21	29	7 Stars rise 3 ho. 38 mi mo.	f	19
10	d			30	Days 15 ho. 40 min.	g	20
11	e	15	15	II	Day break 0 ho. 36 min.	a	21
12	f			2	☉ rise 4 ho. 8 min.	b	22
13	g	4	14	3	☉ set 7 ho. 54 min.	c	23
14	a			4	Day break 0 ho. 20 min.	d	24
15	b	12	16	5	7 Stars rise 3 ho. 20 min.	e	25
16	c			6	☉ rise 4 ho. 2 min.	f	26
17	d	1	7	7	☉ set 7 ho. 58 min.	g	27
18	e	9	14	8	Days 16 ho.	a	28
19	f	17	8	9	No Night, but	b	29
20	g	6	10	10	Twilight.	c	30
21	a			10	7 Stars rise 2 ho. 30 min.	d	31
22	b	14	16	11	☉ rise 3 ho. 55 min.	e	4m
23	c			12	☉ set 8 ho. 6 min.	f	2
24	d	3	11	13	Days 16 ho. 11 min.	g	3
25	e			14	7 Stars rise 1 ho. 56 min.	a	4
26	f	11	3	15	Twilight.	b	5
27	g	19	13	16	☉ rise 3 ho. 52 min.	c	6
28	a	8	20	17	☉ set 8 ho. 8 min.	d	7
29	b			18	Days 16 ho. 16 min.	e	8
30	c			19	7 Stars rise 1 ho. 26 min.	f	9
31	d	16	8	20		g	10

30. June. 4 6 M.P.H.S.

The FOURTH MONTH,

Called *June*, from *Juno*, also a Heathen God-
dess, feigned to be Sister and Wife to *Jupiter*,
and Mother of *Mars*; called before *Quartilis*.
It hath xxx days.

M	W	D	N	II	OP.	Apr.	N	S.
1	c	5	5	21	☉	rise 3 ho. 50 min.	a	11
2	f	13	12	22	☉	set 8 ho. 10 min.	b	12
3	g			23	7 Stars	rise 1 ho. 12 min.	c	13
4	a	2	4	24		Twilight.	d	14
5	b	10	14	25	Len. day	16 ho. 24 min.	e	15
6	c	18	19	26	☉	rise 3 ho. 48 min.	f	16
7	d			26	7 Stars	rise 1 ho.	g	17
8	e	7	7	27	☉	set 8 ho. 12 min.	a	18
9	f			28	Len. day	16 ho. 26 min.	b	19
10	g	15	9	29	☉	rise 3 ho. 47 min.	c	20
11	a			30		<i>Barnabas.</i>	d	21
12	b	4	4	30	7 Stars	rise 12 ho. 52 min.	e	22
13	c			2		Twilight.	f	23
14	d	12	5	3	7 Stars	rise 12 ho. 42 min.	g	24
15	e	1	15	4	Len. day	16 ho. 26 min.	a	25
16	f	9	20	5	☉	rise 3 ho. 48 min.	b	26
17	g	17	7	6	☉	set 8 ho. 12 min.	c	27
18	a	9	23	7		Twilight.	d	28
19	b			8	Len. day	16 ho. 24 min.	e	29
20	c			9	7 Stars	rise 12 ho. 20 min.	f	30
21	d	14	8	10	☉	rise 3 ho. 50 min.	g	31
22	e			11	☉	set 8 ho. 9 min.	a	2
23	f	3	1	12	7 Stars	rise 12 ho. 12 min.	b	3
24	g	11	13	13		<i>John Baptist.</i>	c	4
25	a	19	18	14	Len. day	16 ho. 20 min.	d	5
26	b			15	☉	rise 3 ho. 53 min.	e	6
27	c	8	5	16	7 Stars	rise 11 ho. 54 min.	f	7
28	d			16	☉	set 8 ho. 7 min.	g	8
29	e	16	1	17		<i>Peter and Paul.</i>	a	9
30	f			18		Twilight.	b	10

The FIFTH MONTH,

Called July, from *Julius Caesar* the first Hea-then *Roman* Emperor, being made first Di-
 ctator (or Law-giver) in this Month; cal-
 led before *Quintilis*. It hath xxxi days.

M	W	4	OP.	May.	N	S
D.	D.	N	D	☾		

1	g	5	0	19	☉ rise 3 ho. 57 min.	c	11
2	a	13	2	20	7 Stars rise 11 ho. 46 min.	d	12
3	b	2	13	21	☉ set 8 ho. 1 min.	e	13
4	c	10	21	22	Len. day 15 h. 56 min.	f	14
5	d			23	Twilight.	g	15
6	e	18	5	24	☉ rise 4 ho. 2 min.	a	16
7	f	7	17	25	☉ set 7 ho. 57 min.	b	17
8	g			26	Len. day 15 ho. 44 min.	c	18
9	a			27	Day break 0 ho. 30 min.	d	19
10	b	15	0	28	7 Stars rise 11 ho. 10 min.	e	20
11	c	4	19	29	☉ rise 4 ho. 9 min.	f	21
12	d			30	Day break 0 ho. 40 min.	g	22
13	e	12	14	☉	☉ set 7 ho. 49 min.	a	23
14	f	1	21	2	Len. day 15 ho. 23 min.	b	24
15	g			3	Smiths, Bish.	c	25
16	a	9	5	4	☉ rise 4 ho. 16 min.	d	26
17	b	17	0	5	7 Stars rise 10 ho. 36 min.	e	27
18	c	6	13	5	☉ set 7 ho. 40 min.	f	28
19	d			6	Dog-days begin.	g	29
20	e	14	20	7	Day break 1 ho. 20 min.	a	30
21	f			8	☉ rise 4 ho. 22 min.	b	31
22	g	3	11	9	7 Stars rise 10 ho. 25 min.	c	6m
23	a	11	21	10	☉ set 7 ho. 34 min.	d	2
24	b			11	Len. day 15 ho. 40 min.	e	3
25	c	19	3	12	James Apostle.	f	4
26	d	8	12	13	☉ rise 4 ho. 31 mi.	g	5
27	e			14	☉ set 7 ho. 28 mi.	a	6
28	f	16	16	15	Day break 1 ho. 50 min.	b	7
29	g			16		c	8
30	a	5	12	17		d	9
31	b	13	23	18	7 Stars rise 9 ho. 50 min.	e	10

38 Days. 6 8 m NS

The SIXTH MONTH,

Called *August*, in Honour to *Augustus Caesar*, the 2d Heathen *Roman* Emp. in whose Days *Jesus Christ* the Son of GOD was BORN of the Virgin. Called before *Sextilis*. It hath xxxi.

M		W	6	1	OP.	N		S.
D.		D.	N	D	Ω	S.		N
1	c	2	21	19	☉ rise 4 ho. 40 min.	f	11	
2	d			20	☉ set 7 ho. 19 min.	g	12	
3	e	10	5	21	Len. day 14 ho. 38 min.	a	13	
4	f	18	13	22	Day break 2 ho. 8 min.	b	14	
5	g			23	7 Stars rise 9 ho. 32 min.	c	15	
6	a	7	6	24	☉ rise 4 ho. 48 min.	d	16	
7	b			25	☉ set 7 ho. 10 min.	e	17	
8	c	15	13	26	Len. day 14 h. 16 min.	f	18	
9	d			27	Day break 2 ho. 20 min.	g	19	
10	e	4	8	28	7 Stars rise 9 ho. 12 min.	a	20	
11	f	12	19	29	☉ rise 4 ho. 58 min.	b	21	
12	g			30	☉ set 7 ho. 0 min.	c	22	
13	a	1	6	30	Day break 2 ho. 40 min.	d	23	
14	b	9	13	☉	Len. day 13 ho. 52 min.	e	24	
15	c	17	8	2	7 Stars rise 8 ho. 52 min.	f	25	
16	d			3	☉ rise 5 ho. 6 min.	g	26	
17	e	6	4	4	☉ set 6 ho. 48 min.	a	27	
18	f			5	Day break 3 ho.	b	28	
19	g	14	10	6	Len. day 13 ho. 36 min.	c	29	
20	a	3	21	7	7 Stars rise 8 ho. 34 min.	d	30	
21	b			8	☉ rise 5 ho. 16 mi.	e	31	
22	c	11	6	9	☉ set 6 ho. 38 min.	f	7m	
23	d	19	11	10	Day break 3 ho. 15 min.	g	2	
24	e			11	<i>Bartholomew</i> , Apostle.	a	3	
25	f	8	1	12	7 Stars rise 8 ho. 16 min.	b	4	
26	g			13	☉ rise 5 ho. 26 min.	c	5	
27	a	16	6	14	<i>Dog-days ends.</i>	d	6	
28	b			15	☉ set 6 ho. 27 mi.	e	7	
29	c	5	3	16		f	8	
30	d	13	1	17	Len. day 12 ho. 52 min.	g	9	
31	e	2	0	18	7 Stars rise 7 ho. 56 min.	a	10	

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The SEVENTH MONTH,

Called *September*, or in *Latin Septembris*, which
 still hath kept the right order, being the 7th
 from the Month *March*. It hath xx. days.

M	W	D.	N.	☉	P.	N.	S.
1	f	10	1	19	☉ rise 5 ho. 37 min.	b	11
2	g			20	☉ set 6 ho. 22 min.	c	12
3	a	18	4	21	7 Stars rise 7 ho. 40 min.	d	13
4	b	7	22	22	Len. day 12 ho. 40 min.	e	14
5	c			23	Day break 3 ho. 40 min.	f	15
6	d			24	☉ rise 5 ho. 49 min.	g	16
7	e	15	6	25	☉ set 6 ho. 10 min.	a	17
8	f	4	20	26	Len. day 12 ho. 18 min.	b	18
9	g			27	Day break 3 ho. 52 min.	c	19
10	a	12	6	28	7 Stars rise 7 ho. 18 min.	d	20
11	b	1	13	29	☉ rise 5 ho. 58 min.	e	21
12	c	9	23	30	Day break 4 ho.	f	22
13	d				☾ Days and Nights equal,	g	23
14	e	17	1	2	Each 12 hours.	a	24
15	f	6	21	3	7 Stars rise 7 ho.	b	25
16	g			4	☉ rise 6 ho. 6 min.	c	26
17	a	14	22	5	☉ set 5 ho. 53 min.	d	27
18	b			6	Len. day 11 ho. 44 min.	e	28
19	c	3	7	8	Day break 4 ho. 16 min.	f	29
20	d	11	14	9	7 Stars sou. 3 ho. morn.	g	30
21	e			10	Matthew, Apostle.	a	8m
22	f	19	1	11	☉ rise 6 ho. 18 min.	b	2
23	g	8	6	12	☉ set 5 ho. 42 min.	c	3
24	a			13	Len. day 11 ho. 22 min.	d	4
25	b			14	7 Stars sou. 2 ho. 38 min.	e	5
26	c	16	1	15	☉ rise 6 ho. 26 min.	f	6
27	d	5	18	16	☉ set 5 ho. 33 min.	g	7
28	e	13	7	17	Day break 4 ho. 40 min.	a	8
29	f	2	14	18	Michael, Arch-Angel.	b	9
30	g			19	7 Stars sou. 2 ho. 25 min.	c	10

The EIGHTH MONTH,

Called *October*, it also being the 8th Month, from the Month called *March*, still retaining the Old *Latin* Name. It hath xxxi days.

NW *Days* *Balance* NS.

1	a	10	0	19	☉ rise 6 ho. 36 min.	d	11
2	b	18	20	19	☉ set 5 ho. 23 min.	e	12
3	c			20	Len. day 10 ho. 44 min.	f	13
4	d	7	16	21	Day break 4 ho. 56 min.	g	14
5	e			22	7 Stars so. 2 ho. 5 min. mo.	a	15
6	f	15	23	23	☉ rise 6 ho. 46 min.	b	16
7	g			24	☉ set 5 ho. 12 min.	c	17
8	a	4	8	25	Len. day 10 ho. 24 min.	d	18
9	b	12	16	26	Day break 5 ho.	e	19
10	c	1	23	27	7 Stars so. 1 ho. 46 min.	f	20
11	d			28	☉ rise 6 ho. 56 min.	g	21
12	e	9	12	29	☉ set 5 ho. 2 min.	a	22
13	f	17	20	30	Day break 5 ho. 8 min.	b	23
14	g			m	Len. day 10 ho.	c	24
15	a	6	14	2	7 Stars so. 1 ho. 28 min.	d	25
16	b			3	☉ rise 7 ho. 6 min.	e	26
17	c	14	10	4	☉ set 4 ho. 53 min.	f	27
18	d	3	16	5	<i>Luke Evangelist.</i>	g	28
19	e	11	23	6	Day break 5 ho. 16 min.	a	29
20	f			7	7 Stars so. 1 ho. 9 min.	b	30
21	g	19	15	8	☉ rise 7 ho. 15 min.	c	31
22	a			9	☉ set 4 ho. 44 min.	d	gm
23	b	8	9	10	<i>Term begins.</i>	e	2
24	c			11	Len. day 9 ho. 26 min.	f	3
25	d	16	18	12	7 Stars so. 12 ho. 50 min.	g	4
26	e			13	☉ rise 7 ho. 24 min.	a	5
27	f	5	7	14	☉ set 4 ho. 34 min.	b	6
28	g	13	1	15	<i>Simon and Jude.</i>	c	7
29	a	2	0	16	Day break 5 ho. 30 min.	d	8
30	b	10	10	17	Len. day 9 ho.	e	9
31	c			18	7 Stars so. 12 ho. 24 min.	f	10

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The NINTH MONTH,
Called *November*, signifying Nine in *Latin*,
it being the Ninth from the Month called
March. It hath xxx days.

M W T	D. D. N.	☉ P.	N. S.
1 d	18 7	19 ☉ rise 7 ho. 34 min.	d 11
2 e		20 ☉ set 4 ho. 25 min.	d 12
3 f	7 9	21 Len. day 8 ho. 10 min.	d 13
4 g		22 7 Stars sou. 12 ho. 10 mi.	c 14
5 a	15 12	23 Powder Plot.	d 15
6 b	4 17	24 ☉ rise 7 ho. 41 min.	e 16
7 c		25 ☉ set 2 ho. 18 min.	e 17
8 d	12 4	26 Day break 5 ho. 40 min.	d 18
9 e	1 13	27 Len. day 8 ho. 10 min.	d 19
10 f		28 7 Stars sou. 13 ho. 48 mi. m.	d 20
11 g	9 4	29 Day break 5 ho. 44 min.	e 21
12 a	17 10	30 ☉ rise 7 ho. 50 min.	d 22
13 b		1 ☉ set 4 ho. 9 min.	e 23
14 c	6 6	2 Len. day 8 ho. 16 min.	e 24
15 d	14 19	3 7 Stars sou. 11 ho. 26 min.	d 25
16 e		4 ☉ rise 7 ho. 46 min.	d 26
17 f	3 2	5 ☉ set 4 ho. 3 min.	d 27
18 g	11 10	6 Len. day 8 ho. 5 min.	c 28
19 a		8 Day break 5 ho. 40 min.	d 29
20 b	19 2	9 7 Stars sou. 11 ho. 4 min.	e 30
21 c		10 ☉ rise 8 ho. 1 min.	e 31
22 d	8 3	11 ☉ set 3 ho. 59 min.	d 2
23 e		12 Len. day 7 ho. 58 min.	d 3
24 f	16 13	13	b 4
25 g	5 18	14 7 Stars sou. 10 ho. 50 min.	c 5
26 a	13 6	15 ☉ rise 8 ho. 6 min.	d 6
27 b	2 11	16 ☉ set 3 ho. 53 min.	e 7
28 c		17 Day break 5 ho. 54 min.	e 8
29 d	10 0	18 7 Stars sou. 10 ho. 20 min.	d 9
30 e		19 Andrew Apostle.	d 10

Ref.

Oct.

The TENTH MONTH.

Called *December*, being the Tenth from the Month of March, and not the Twelfth, as some suppose. It hath xxxi days.

M.	W.	D.	N.	P.		N.	S.
1	f	18	3	20	☉ rise 8 ho. 10 min.	b	11
2	g			21	☉ set 3 ho. 50 min.	c	12
3	a	7	3	22	Len. day 7 ho. 39 min.	d	13
4	b	15	18	23	Day break 5 ho. 58 min.	e	14
5	c			24	7 Stars sou. 9 ho. 54 min.	f	15
6	d	4	5	25	☉ rise 8 ho. 13 min.	g	16
7	e	12	7	26	☉ set 3 ho. 47 min.	a	17
8	f			27	Len. day 7 ho 36 min.	b	18
9	g	1	4	28	Day break 6 ho.	c	19
10	a	9	22	29	7 Stars sou. 9 ho. 32 min.	d	20
11	b			30	Len. day 7 ho. 34 min.	e	21
12	c	17	4	1	Shortest Day.	f	22
13	d	6	10	2	☉ rise 8 ho. 13 min.	g	23
14	e			3	☉ set 3 ho. 47 min.	a	24
15	f	14	1	4	7 Stars sou. 9 ho. 10 min.	b	25
16	g	3	12	5	Len. day 7 ho. 34 min.	c	26
17	a	11	23	6	Day break 6 ho.	d	27
18	b			7	☉ rise 8 ho. 12 min.	e	28
19	c	19	21	8	☉ set 3 ho. 48 min.	f	29
20	d			9	7 Stars sou. 8 ho. 50 min.	g	30
21	e	8	23	10	Thomas, Apostle.	a	31
22	f			11	Len. day 7 ho. 46 min.	b	1
23	g	16	22	12	☉ rise 8 ho. 6 min.	c	2
24	a			13	☉ set 3 ho. 54 min.	d	3
25	b	5	8	14	Christ's Nativity	e	4
26	c	13	0	15	Stephen, Martyr.	f	5
27	d	2	2	16	John, Evangelist.	g	6
28	e	10	18	17	Herod de Innoc.	a	7
29	f			18	7 Stars sou. 8 ho. 10 min.	b	8
30	g	18	20	19	Len. day 7 ho. 56 min.	c	9
31	a	1		20	Day break 5 ho. 54 min.	d	10

30 Day (11)

The ELEVENTH MONTH,

Called *January*, from *Janus*, the *Romans* first
Heathen King and God, in Honour to which
they Built a Temple, &c. It hath xxxi days.

NW	☾	☉P.		N.S.
D.D.	N.D.			
1 a	8 21	21	Circumcision of our Lord.	d 11
2 b	16 21	22	☉ rise 8 ho. set 4 ho.	e 12
3 c		23	Day break 5 ho. 52 min.	f 13
4 d	5 14	24	Len. day 8 ho. 8 min.	g 14
5 e	13 20	25	7 Stars so. 7 ho. 36 min.	a 15
6 f		26	Epiphany.	b 16
7 g	2 21	27	☉ rise 7 ho. 50 min.	c 17
8 a		29	☉ set 4 ho. 10 min.	d 18
9 b	10 18	30	Len. day 8 ho. 16 min.	e 19
10 c	18 16		Day break 5 ho. 44 min.	f 20
11 d		2	☉ rise 7 ho. 49 min.	g 21
12 e	7 10	3	☉ set 4 ho. 11 min.	a 22
13 f	15 9	4	7 Stars set 3 ho. 16 min. mo	b 23
14 g		5	Len. day 8 ho. 30 min.	c 24
15 a	4 1	6	Day break 5 ho. 40 min.	d 25
16 b	12 16	7	☉ rise 7 ho. 42 min.	e 26
17 c		8	☉ set 4 ho. 18 min.	f 27
18 d	1 23	9	7 Stars set 2 ho. 58 min.	g 28
19 e		10	Len. day 8 ho. 46 min.	a 29
20 f	9 18	11	Day break 5 ho. 37 min.	b 30
21 g		12	☉ rise 7 ho. 34 min.	c 31
22 a	17 1	13	7 Stars set 2 ho. 38 min.	d 12 ^m
23 b	6 16	14	Term begins.	e 2
24 c	14 0	15	Len. day 9 ho. 10 min.	f 3
25 d	3 18	16	Conversion of Paul.	g 4
26 e		17	☉ rise 7 ho. 26 min.	a 5
27 f	11 13	18	Day break 5 ho. 25 min.	b 6
28 g		19	7 Stars set 2 ho. 16 min.	c 7
29 a	19 11	20	☉ set 4 ho. 30 min.	d 8
30 b		21	Len. day 9 ho. 18 min.	e 9
31 c	8 0	22		f 10

Nov

2. 7. 11. 2. 7. 3. (12) 3. 1. Days

The TWELFTH MONTH,
 Called *February*, from *Februa* Feasts, then
 to *Pluto*, (feigned God of Hell) was kept
 with Candles burning ; hence *Candlemas*.
 It hath xxviii days, and Leap-year xxix.

Dec		M	W	T	D	⊙	P.	Dec	N	S.
D.	D.	N	D					Water		
1	D	16	12	23	⊙	rise 7 ho.	47 min.	B	11	
2	E			24		Purification	Virgin Mary	a	12	
3	F	5	2	25	7	Stars set	1 ho. 56 min. mo.	b	13	
4	G	13	10	26		Day break	5 ho. 10 min.	c	14	
5	A			27		Len. day	9 ho. 42 min.	d	15	
6	B	2	17	28	⊙	rise 7 ho.	8 min.	e	16	
7	C			29	⊙	set 4 ho.	52 min.	f	17	
8	D	10	13	30		Day break	5 ho. 5 min.	g	18	
9	E	18	9	31	7	Stars set	1 ho. 34 min.	a	19	
10	F	7	18	2		Days	10 ho. long	b	20	
11	G	15	19	3	⊙	rise 6 ho.	58 min.	c	21	
12	A			4		Term ends.		d	22	
13	B	4	14	5	⊙	set 5 ho.	4 min.	e	23	
14	C			6	7	Stars set	1 ho. 14 min.	f	24	
15	D	12	22	7		Day break	5 ho.	g	25	
16	E			8	⊙	rise 6 ho.	41 min.	a	26	
17	F	1	7	9	⊙	set 5 ho.	18 min.	b	27	
18	G			10	7	Stars set	12 ho. 55 min.	c	28	
19	A	9	8	11		Len. day	10 ho. 40 min.	d	1m	
20	B	17	10	12		Day break	4 ho. 48 min.	e	2	
21	C			13	⊙	rise 6 ho.	34 min.	f	3	
22	D	6	3	14	⊙	set 5 ho.	28 min.	g	4	
23	E	14	20	15	7	Stars set	12 ho. 40 min.	a	5	
24	F	3	10	16		Matthias	Apostle	b	6	
25	G			17		Day break	4 ho. 36 min.	c	7	
26	A	11	7	18	⊙	rise 6 ho.	28 min.	d	8	
27	B	19	18	9	⊙	set 5 ho.	33 min.	e	9	
28	C			20		Len. day	11 ho. 8 min.	f	10	

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*The Explanation and Use of the Tables of
the Twelve Months, before-expressed.*

On the top of every Month stands the Ancient Scripture Names, viz. the first Month, the second Month, &c. unto the twelfth Month, *Gen. 7. 10. and 8. 14, 15. Exod. 12. 18. Numb. 9. 11. and 29. 1. Ezra 29. 1. Zech. 1. 1.* And also the Names as they are called by, (viz.) *March, April, &c.* and from whence those Names were derived, as it is related in History, it being a shame and disgrace to Christian Religion, to have the Heathen Gods and Goddeses, so much in Esteem among them, as to Name their Months thereafter, to keep up the Memory of them.

Every Month is divided into eight Columns, the first of which hath the days of the Month, with D. M. at the top; the second Column hath the Letters for the days of the Week, like every Common Annual Almanack, (having at the top W. D.) one thereof being always Dominical Letter, and is usually yearly Printed in Red. To find it any Year, look in the following

C

Table.

Table. The third Column with N. at the top, is the Golden Number, which is also found by the said Table for any Year therein ; the same number find in this Column, and in the next to it, (with γ at the top) is the Hour that the New Moon falleth in or near, always observing, that it is so many hours after Noon of that day, that it standeth against, which if it be more than 12, (as often it is) it belongs to the following day.

Example.

I desire to know when the Moon Changes in the eighth Month 1693. I observe by the following Table that 3 is the Golden Number for that Year, so I look in the eighth Month, and third Column, with N. at top, until I find 3, which being found against the eighteenth day ; and against it towards the Right Hand, under γ stands 16. which shews, that the New Moon falleth on the nineteenth day of the Month, about Four in the Morning, a. being Dominical Letter for that Year ; which shews it to be the Fifth day of the Week:

(15)
Week : The like is to be observed in any other Year or Month.

The fifth Column hath the Sun's place in the Ecliptick every day with ☉ R. at top. In the sixth Column is inserted the Rising and Setting of the Sun in Hours and Minutes, as thus, ☉ rise. ☉ set. &c. and length of the Day : Also Break of Day, with the Rising, Southing, or Setting of the Seven Stars, which is necessary often in finding the Hour of the Night, all these are inserted about five or six times in each Month, with Hours, and Minutes, and such Days as are between every particular Matter may easily be guessed at, without any sensible Error, which doth consist only of a few Minutes, as in the Seven Stars, they come sooner to the South by near 4 Minutes, every Day than other.

In this Column also is some particular Days of Note, as such as are kept by some in Honour of the Apostles, &c. which sometime upon occasion may be necessary to be known, of which more follows hereafter.

And in the two last Columns with N. S. above, is the New Style, both Week-days,

days, and Month-days, which is Ten Days before ours; so that their eleventh Day of the Month, (beyond Sea, where 'tis in use) is our first Day: And to find their Dominical Letter also, peruse the following Table, their Days of the Week are the same with ours.

Year	Sept 14	O.S.N.S.	Dominical Letter	Last Day	O.S.N.S.	
1721	12	12	2	22	4	D
1722	13	23	13	23	5	C
1723	14	4	24	24	5	B
1724	15	15	5	25	E.D.	A
1725	16	26	16	26	C	F
1726	17	7	27	27	B	E
1727	18	18	8	28	A	D
1728	19	29	19	1	G.F.	C

A

from 1691 to 1720 both Inclusive
are 30 years, and to 1721
both Inclusive are 31 years.

A Table to find the Golden Number, Epact, Cycle of the Sun, Dominical Letter, both New and Old Style, for 30 Years.

Easter
Day.

O. S. N. S.

Ann. Dom.	G. N.	Epact.		C. O.	Dom. Let.	
		O.S.	N.S.		O.S.	N.S.
1691	1	11	1	20	d	g
1692	2	22	12	21	c b	f e
1693	3	3	23	22	a	d
1694	4	14	4	23	g	c
1695	5	25	15	24	f	b
1696	6	6	26	25	e d	a g
1697	7	17	7	26	c	f
1698	8	28	18	27	b	e
1699	9	9	29	28	a	d
1700	10	20	10	1	g f	c b
1701	11	1	21	2	e	a
1702	12	12	2	3	d	g
1703	13	23	13	4	c	f
1704	14	4	24	5	b a	e d
1705	15	15	5	6	g	c
1706	16	26	16	7	f	b
1707	17	7	27	8	e	a
1708	18	18	8	9	d c	g f
1709	19	29	19	10	b	e
1710	1	11	1	11	a	d
1711	2	22	12	12	g	c
1712	3	3	23	13	f e	b a
1713	4	14	4	14	d	g
1714	5	25	15	15	e	f
1715	6	6	26	16	b	e
1716	7	17	7	17	a g	d c
1717	8	28	18	18	f	b
1718	9	9	29	19	e	a
1719	10	20	10	20	d	g
1720	11	1	21	21	c b	f e

The Explanation.

This Table being so easie to understand, that the Titles at the top of every Column explain it, as in one Example I will shew; the Year 1695. being found in the first Column, against it in the second Column towards the Right Hand is 5. with G. N. at top, it being the Golden Number; in the third Column with Epact O. S. is 25. being Epact Old Stile; and in the fourth Column with N. S. is 15. being Epact New Stile; in the Fifth Column with C. O. is 24. for the Cycle of the Sun; in the Sixth Column is f. for Dominical Letter Old Stile; and in the seventh is b. Dominical Letter New Stile; and all these for *Anno* 1695. the Golden Number, and Cycle of the Sun, being the same for both Accounts.

And this Table will serve for this use in a manner perpetually, by beginning again, (when 1720. is expired) at 1702. calling it 1721. and so proceeding downwards, which will again end in 1739. so this order will serve for the Golden Number, and Epacts.

And

And likewise for the Cycle of the Sun, and Dominical Letters, when this Table is expired, begin again at 1693. calling it 1721. and so proceed after the same manner.

Of the Golden Number.

The Golden Number (called also the Prime) is a Revolution of nineteen Years, proceeding from 1. to 19. and then beginning again at 1. (and it was so called, because it was sent in Golden Characters in Tables of Silver, from *Alexandria* in *Egypt* to *Rome*) for in that space of time 'tis thought that the Moon doth make all her sundry Aspects and Changes with the Sun, but we may observe according to the Moons mean motion, that a Conjunction of the Moon with the Sun in this term of Years, will fall near one hour and half sooner than it did; so that look what Change hapned in 1693. the 23d of the 4th Month at 1 hour past Noon, we may conclude in 1712. (the Prime being the same) that the Change will then happen before Noon that said 23d Day; the like order is to be observed

in all the other Changes in the space of 19 Years, which (I suppose) will suit the time near enough for any common use without any sensible Error. This Golden Number always changeth the first of the Eleventh Month, and is thus found out by Arithmetick ; add 1. to the Year of our Lord, and divide the whole by 19. and the remainder is the Golden Number for that Year.

Example.

In 1694. I add 1. to it makes 1695. which being divided by 19. there remains 4. it being the Prime for that Year, as appears by the foregoing Table.

Of the Epact.

The Epact is the number of 11 Days, which the common Solar Year exceeds the common Lunar Year : A common Lunar Year consists of 12 Moons, every Moon consisting of about 29 Days and an half, which make in all 354 Days, or a Lunar Year ; and a common Solar Year consists of 365 Days and odd Hours,

Hours, (of which more hereafter) now here is 11 Days difference, and 11 is added to it every Year until it surmounts 30, then take 30 away, and the remainder is the Epact; for the Moon never exceeds that number of 30 Days between Change and Change; to find it by Arithmetick, do thus, multiply the Prime by 11. the product thereof, if it be under 30, is the Epact, but if the product be above 30, then divide the product by 30, and the remainder is the Epact.

An Example.

In 1694. 4 being Golden Number, being multiplied by 11 maketh 44, which 44 divide by 30, or take 30 from it, and there remains 14, which is the Epact for that Year. *Note*, the Epact changeth the first of the first Month.

Of the Cycle (or Circle) of the Sun and Dominical Letter.

The Cycle of the Sun is the Revolution of 28 Years, not so called because it sheweth any Motion of the Sun, but

that in those term of Years the Seven Letters a. b. c. d. e. f. g. signifying the Seven Days of the Weeks, (one of them being always Dominical Letter) have all their Changes, so that when 28 Years are expired, the same Letters for Dominical Letters serve over again, in the very same order as before; and the cause why this Letter changes every Year, is, there being an odd Day in the Year, the whole consisting of 52 Weeks and 1 Day; and the last Day of the 10th Month, and the first Day of the 11th Month hath a. against them, so of necessity there must be a change of this Letter to keep the Days of the Week in order, and it doth change the first Day of the 11th Month (called *January*, which Letter is always a.) and serveth until that time again, unless it be Leap Year, which chanceth every fourth Year, then there is two Dominical Letters, the first begins as before, and continues until the 25th Day of the Twelfth Month, which is called *Matthias Day*, (and other Years falleth on the 24th Day.) and the other Dominical Letter serves from that time until the first of the 11th Month following. And for

to find the Cycle of the \odot by Arithmetick, add 9 to the Year desired, and divide the whole by 28, and the remainder is the Cycle of the Sun for that Year, so for any time past, or to come, it being found out, find it in the Table, and against it is always the Dominical Letter.

Example.

In the Year 1695. I desire to know the Cycle of the Sun, then I add 9 to 1695. and that makes 1704. which being divided by 28, there is 24 remaining, which is the number desired, and directs to f. for the Dominical Letter Old Style, and d. Dominical Letter New Style.

Of the Roman Indiction.

This Circle contains 15 Years, but we have no great use of it in England, but it is used of the Bishops of Rome in the Instruments and Writings of their Pronotations, imitating thereby the Old Romans, although theirs were upon the account of paying Tribute; to

find

find it out, add 3 to the Year of our Lord, and divide all by 15, and the remainder is the *Roman* Indiction.

An Example.

In the Year 1696. this number is desired to be known, to this Year 3 being added makes 1699. and divided by 15, there remains 4, being the *Roman* Indiction for that Year.

Of the Old and New Style.

The Old Style, or *stylo veteri*, is called the *English* Account, or *Julian* Account, so called from *Julius Caesar*, who noting the falseness of the Year then used, by the Council of *Sosigenes*, an Expert Mathematician, made the Year to consist of 365 Days and 6 Hours; and because the odd 6 Hours should make no difference every fourth Year a Day was added, called Leap Year, which consists of 366 Days, and then the Twelfth Month hath 29 Days in it, (it is also called *Bissexile*) of *bis* and *sex*, twice six, because the sixth Calends, (so called) of the first Month

Month is twice repeated, by reason of the Day that is put between, and Leap Year by this Addition of a Day, causeth the fixed noted Days to leap one Day further in the Week than they do in other Years.

The *Julian* Year is Erroneous, and I know but few Nations in *Europe* observe it, but the *English*, and such as are under their Dominion, it being too large by above 10 Minutes, which in process of time, without Amendment, will make the Sun to enter *Aries* on the first of the first Month, which now he doth about the 10th, and about 12 or 1300 Years ago he entred *Aries* on the 20th.

The New Style, or *Stylo Novo*, called the New or *Roman* Account, or *Lilian* Account, also the *Gregorian* Account which began in the time of Pope *Gregory* 13. in the Year of Christ 1582. and *Aloysius Lilius* being one of the Chief Actors in this Correction, which began (according to *G. Wharton*) the 5th of the 8th Month of the *Julian* Year, thereby making it the 15, so they subtracted 10 Days from the 4 of the said Month unto the 15 exclusively, that
thereby

thereby they might make the Vernal Equinox (on which the Moveable Feasts depend) agree to the 21 of the first Month, as it was by the *Nicene Council* Established, *Anno* 324. so their Year was made to consist of about 10 Minutes less than the *Julian Year*, which is 365 Days, 5 Hours, 49 Minutes, and some Seconds, being reckoned to be an Exact Year of the Sun, our Year being too much, as I said, by the odd Minutes, so that in about 134 Years from the first Correction, will be a Day more difference than now is, so they appointed, (to keep the time invariable) that of 400 Years in the first, second, and third Hundred, the Leap Day (which is in the *Julian Year*) should be omitted and not put in, but in the 400 that the Leap Day should not be omitted, but put in.

Example.

Over and beside the 10 Days subtracted as aforesaid from our Year, in the Year 1700, by omitting the Leap Day, their Account shall be 11 Days before ours; and in the Year 1800, 12 Days.

Days before ours, and in the Year 1900, 13 Days before, and *Anno 2000*, the Leap Day not to be omitted, so it is to remain 13 Days until 2100, then to be 14 Days, and thus proceeding after this order from Generation to Generation.

Of the Number of Direction.

This is a certain number that changeth yearly, and keepeth no true order, 1 being the least, and 35 the greatest number it contains, which is the greatest number of Days that falleth between the lowest and highest of the noted Moveable Days; as the time called *Easter* falleth sometimes on the 22d Day of the first Month, it being the lowest that it can at any time fall; as in the Year 1668: it fell so, the number of Direction being then 1, and sometimes it falleth on the 25th of the ^{April} Second Month, which is the highest that it can fall, as in the Year 1641: it did, then the number of Direction was 35, for between both those times, (including those Days, viz. the 22d and 25th of the first and second Months

(28)

as aforefaid) are 35 Days ; fo, I fay,
they keep no true order, but depend
upon the Courfe of the Moon ; and for
finding the fame always, the following
Table is inferted.

*the alteration of the Style began in
when the 2^d Sept expired, the fo
viz the 3^d was accounted*

A

an in 1752. and
the following day
nted the 14.



A Table shewing the Number of Direction, for both Accompts, with the help of the Golden Number, and Dominical Letter.

G.N.	A.	B.	C.	D.	E.	F.	G.
1	19	20	21	22	16	17	18
2	5	6	7	8	9	10	11
3	26	27	28	29	30	24	25
4	19	13	14	15	16	17	18
5	5	6	7	8	2	3	4
6	26	27	21	22	23	24	25
7	12	13	14	15	16	10	11
8	33	34	35	29	30	31	32
9	19	20	21	22	23	24	18
10	12	13	7	8	9	10	11
11	26	27	28	29	30	31	32
12	19	20	21	15	16	17	18
13	5	6	7	8	9	10	4
14	26	27	28	29	23	24	25
15	12	13	14	15	16	17	18
16	5	6	7	1	2	3	4
17	26	27	28	29	23	24	25
18	12	13	14	15	9	10	11
19	33	34	28	29	30	31	32

Ex-

Explanation.

Having found out the Golden Number, and Dominical Letter for any Year desired, find the G. N. in the first Column on the Left Hand, and Dominical Letter at the top, and in the common Angle (towards the Right Hand from the Golden Number, and under the Dominical Letter) is the Number of Direction for the said Year.

Example.

I desire to know this number for the Year 1696. by the former Direction I find 6 to be the Golden Number, and e. d. Dominical Letters Old Stile, and a. g. New Stile; now d. is the last, which is in use in our Accompt, and g. is the last, which is in use in the *Roman* Accompt; so from 6 the Prime, under D. the Dominical Letter, is 22. the Number of Direction for us *English*, and under G. is 25, which is the Number of Direction New Stile, for beyond Sea.

A Table to find out the time called *Easter Day*, and *Whitsunday* (or *Pentecost*) also the beginning and ending of the two Moveable Terms, known by the Names of *Easter Term*, and *Trinity Term*.

N.	Ma D.		Pente.		E.T.b.		E.T.e.		T.T.b.		T.T.e.		N.D
D.	M.	D.	M.	D.	M.	D.	M.	D.	M.	D.	M.	D.	N. S.
1	1	22	3	10	2	8	3	4	3	22	4	10	29
2	1	23	3	11	2	9	3	5	3	23	4	11	30
3	1	24	3	12	2	10	3	6	3	24	4	12	31
4	1	25	3	13	2	11	3	7	3	25	4	13	32
5	1	26	3	14	2	12	3	8	3	26	4	14	33
6	1	27	3	15	2	13	3	9	3	27	4	15	34
7	1	28	3	16	2	14	3	10	3	28	4	16	35
8	1	29	3	17	2	15	3	11	3	29	4	17	1
9	1	30	3	18	2	16	3	12	3	30	4	18	2
10	1	31	3	19	2	17	3	13	3	31	4	19	3
11	2	1	3	20	2	18	3	14	4	1	4	20	4
12	2	2	3	21	2	19	3	15	4	2	4	21	5
13	2	3	3	22	2	20	3	16	4	3	4	22	6
14	2	4	3	23	2	21	3	17	4	4	4	23	7
15	2	5	3	24	2	22	3	18	4	5	4	24	8
16	2	6	3	25	2	23	3	19	4	6	4	25	9
17	2	7	3	26	2	24	3	20	4	7	4	26	10
18	2	8	3	27	2	25	3	21	4	8	4	27	11
19	2	9	3	28	2	26	3	22	4	9	4	28	12
20	2	10	3	29	2	27	3	23	4	10	4	29	13
21	2	11	3	30	2	28	3	24	4	11	4	30	14
22	2	12	3	31	2	29	3	25	4	12	5	1	15
23	2	13	4	1	2	30	3	26	4	13	5	2	16
24	2	14	4	2	3	1	3	27	4	14	5	3	17
25	2	15	4	3	3	2	3	28	4	15	5	4	18
26	2	16	4	4	3	3	3	29	4	16	5	5	19
27	2	17	4	5	3	4	3	30	4	17	5	6	20
28	2	18	4	6	3	5	3	31	4	18	5	7	21
29	2	19	4	7	3	6	4	1	4	19	5	8	22
30	2	20	4	8	3	7	4	2	4	20	5	9	23
31	2	21	4	9	3	8	4	3	4	21	5	10	24
32	2	22	4	10	3	9	4	4	4	22	5	11	25
33	2	23	4	11	3	10	4	5	4	23	5	12	26
34	2	24	4	12	3	11	4	6	4	24	5	13	27
35	2	25	4	13	3	12	4	7	4	25	5	14	28

*The Explanation of the foregoing Table of
Moveable Days.*

The first Column on the Left Hand under N. D. is the Number of Direction for the Old Stile, or *Julian Account*, and the last Column towards the Right Hand, under N. D. N. S. is the Number of Direction for the New Stile or *Roman Account*, and between these two Columns are 6 more, every one of them is divided, seeming as if it were two, the first of them with Ea. D. at top, and M. D. under it, shews *Easter Day* (so called) under M. is the Month, and under D. is the Day of the Month: The second Column under *Pente.* (or *Whitsuntide*) M. D. shews also the Month, and Day of the Month, when it falls; and in like manner is the third and fourth Columns of the beginning and ending of *Easter Term*, Entituled E. T. b. M. D. and E. T. e. M. D. which M. stands for the Month, and D. for the Day of the Month, (as aforesaid) so in like manner is the other two Columns to be understood, Entituled T. T. b. and T. T. e. with
M. D.

M. D. shewing the Month, and Day of the Month that *Trinity Term* (so called) begins and ends.

Example.

In the Year 1696. 22. being the Number of Direction (Old Style) as before appears; which being found in the first Column of this Table under N. D. and in the second divided Column against it is 2. 12. under M. D. which denotes that the time called *Easter* in 1696. falls on the 12th Day of the 2d Month, and *Pentecost* falls on the 31th Day of the 3d Month, as the next divided Column denotes, with its Title at top, and the third divided Column shews that *Easter Term* begins in the 2d Month on the 29th Day, and ends in the 3d Month on the 25th Day, as the 4th Column divided shews; and the 5th divided Column shews, that *Trinity Term*, (so called) begins in the fourth Month, and on the 12th Day, and ends in the 5th Month on the first Day, and so in like manner is to be observed in any Year past or to come, only note, that for this Year 1696. 25 is the Number

Number of Direction for the New Stile, which doth direct their *Easter* to fall on the 22d Day of the 2d Month, and their *Pentecost* to fall on the 10th of the 4th Month, as it plainly appears by this Table, finding 25 on the Right Hand, and in a straight Line from thence, under the Titles it is demonstrated, and the *Roman Account* falling 10 Days before ours, makes them to fall on the same Day with ours this Year, although the next Year 1697. our *Easter* will fall on the 4th of the 2d Month, and theirs on the 31st of the first Month, and then theirs will be two Weeks before ours, as is shewed by the former method.

Yet by this following Table it may seem more Brief in finding out *Easter* any Year, according to the *English Account*, by help of the *Golden Number*, and *Dominical Letter*.

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Numb. Gold.	An Exact Table to find <i>EASTER</i> for any time.						
	A.	B.	C.	D.	E.	F.	G.
1	2	9	2	10	2	11	2
2	1	26	1	27	1	28	1
3	2	16	2	17	2	18	2
4		9		3		4	
5	1	26	1	27	1	28	1
6	2	16	2	17	2	18	2
7		9		3		4	
8		23		24		25	
9		9		10		11	
10		2		3		4	
11		16		17		18	
12		9		10		11	
13		26		27		28	
14	2	16	2	17	2	18	2
15		9		10		11	
16	1	26	1	27	1	28	1
17	2	16	2	17	2	18	2
18		9		10		11	
19		23		24		25	

Explanation.

Find the Golden Number in the first Column, and dominical Letter at the Top (as in the Table of the number of Direction) and in the Angle of Meeting is the Month, and Day of the Month,

Month, that the time called *Easter* falleth on; the first scattering row of figures in every Column is for the Month, and the second row the Day of the same; there being some other Days observed by several, that are moveable, but are always at a certain distance of time from *Easter*, as,

-Shrove-sunday,	} is called {	7 Weeks before	} <i>Easter</i> .
Ascension-day,		40 Days after	
Rogation-sunday,		5 Weeks after	
Trinity-sunday,		8 Weeks after	

The time that is called *Easter*, Acts 12. 4. being the same, although with us some Days difference, that the Jews kept as their Passover, (called *Pascha*) in remembrance of their passing out of *Egypt*, which was kept on the fourteenth Day of their first Month at Even, which fell on the fifth Day of the Week, at that time when Christ suffered; for that Night he was Betrayed, and the next Day he was Crucified, being the Day before the Sabbath, which was the seventh Day, and the Day after the Sabbath being the first Day of the Week, he arose again.
And

And the time that is now called *Whitsuntide*, but in Scripture it is called *Pentecost*, *Acts* 2. was that time when the Apostles of Jesus met together with one accord, and witnessed the fulfilling of *Joel's* Prophecy, (*viz.*) the pouring forth of the Holy Spirit upon them in a wonderful manner; as also Christ himself had foretold them, not to depart from *Jerusalem*, but wait for the Promise of the Father, which was, to be Baptized with the Holy Ghost not many days hence, *Acts* 1. which being then accomplished or fulfilled, even to the Conversion of about Three Thousand Souls, by the Preaching of *Peter*, and the Operation of God's Spirit therewith.

But as to these days here mentioned that are Moveable, and several others that are fixed, called Holidays, that are inserted in the Calendar; it is not my intent to perswade any one to believe that there is any more Holiness in them, than in any other days, because they are many of them seemingly upheld, in honour to our Saviour Jesus Christ, and his Apostles: But it is evident, that the Lord is more dishonour-

ed upon several of those days, pretended to be kept holy, than upon others that are not accounted such; and by some of those also professing Christianity, as might be made appear, by the Day observed for the Nativity of our Saviour, (being the 25th of the 10th Month called *December*.) and some following Days; what Excess is used, both as to Gluttony and Drunkenness? What Swearing and Cursing? What Gaming and Playing? What Vain Sporting and Idle Jesting, with many other things unbecoming very Heathens, much more Christians, to be found in; so that I believe there is more Evil Acted in one Week at that time, than there is in one Month at some other time, and by those also that say, Christ is their Saviour, and that they ought to keep a Day in Honour to him, and rejoice and be glad, though they never knew him to save them from their Sins, but are in that state that he pronounced Woe unto, and said, You shall howl and weep, *Luke* 6. 25. for he forbid his own Disciples to rejoice, in that the evil and unclean Spirits were subject unto them, *Luke* 10. 20. Oh! then

then how much less Cause hath those to rejoyce that are in Subjection and Bondage to this unclean Spirit? But he himself was said to be a Man of Sorrows, and acquainted with Grief; for I never read that ever any saw him laugh, but often weep. And those rejoyce also on *Stephen's Day*, and on *Innocents Day*, as if they were glad, that the hard-hearted *Jews* used such Cruelty in stoning that Just Man to Death, and that *Herod* caused to be Murdered so many Innocent Children, intending thereby to have slain Jesus Christ: And to rejoyce and make merry on those Days, seems as if they joined with them, and partook of their Acts and Cruelty, by rejoicing thereat.

But some of a more sober and moderate Mind, Object and say, *We do confess that there is much Iniquity committed at such times, which ought not to be, therefore we should not join with those that do it, but keep such Times in serving God, as in hearing good Sermons, &c. so in that I.ve we bear unto our Saviour and his Apostles, we ought to spend those Times in his Worship and Service.; and not because of some*

Abuses therein, to forbear their Observation.

Ans. Indeed this Objection seems to carry something of a weight with it; and those that do believe it their Duty to regard any Day, upon the account (as aforesaid) and do it Conscienciously, as unto the Lord, I do not judge them; but I say, let all consider whether they are not doing that which is not required of them, and in their own wills; and so may justly be answered as those were of old by the Lord, through the Mouth of his Prophet, saying, *Who hath required this at your Hands?* Isa. i. 12. For I do not find that the Christians have any Command or Example in the *New Testament*, to observe or keep any Day in Honour of Christ himself, or his Apostles particularly; but it would be more like a Disciple of Jesus, to be found obeying him in his Commands, and following of him as an Example, (than to do that for which there is no Command, and leave undone what is) then all Days would be kept Holy unto him; for he saith, *If ye love me keep my Commands;* and

and such he calls his Friends, *John* 14. 15. and 15. 14. For keeping his Commands would be a far greater Testimony to manifest our Loves to him, than to busie our selves with such things that he never ordained. But if any should Ignorantly, or in a forward Spirit say, What doth he command? (like the Lawyer that was willing to justify himself in asking Questions) let them look, *Luke* 10. 25, 26, 27, 28, 29. *Mat.* 5, and 6. *Luke* 6. 27, 28, &c. *Joh.* 15. 12, 17. with divers more. Also there is that nearer (which doth witness with the foregoing places) even in the Heart, *Dent.* 30. 11, 12, 13, 14. *John* 16. 13. *Rom.* 10. 8. 1 *John* 2. 27. that is ready to assist Man to perform what is required of him; for without his help we can do nothing acceptable to him.

But some may farther Object, and say, *That I do confess that the Jews did observe Days, and they were the Lord's People; then why may not the Christians, which are the Lord's People, do in like manner?*

Ans. But the Times that they did observe were of the Lord's ordaining; and so long as they kept their Integrity to him, he was well-pleased with them in so doing; but after they revolted in their Hearts from the Lord, those very things became an Abomination unto him, insomuch the Prophets cried out against them, *Isa.* 1. 14. *Amos* 5. 12. and an Observer of such Times as the Lord ordained not, was not to be among them while they kept to him, but was also an Ahomination, *Deut.* 18. 10, 14. Besides, the Christians being under another Administration than the Jews were, therefore why ought the Christians any more to take them for an Example in this, than in Circumcision, or Sacrifice; for *Paul* saith, *Let no Man judge you in Meat, or in Drink, or in respect of an holy day, &c. which were as shadows of things to come, but the body (or substance) is of Christ,* *Col.* 2. 11, 16, 17. and he doth bring it as an Evidence against the *Galathians* of their disobedience unto the Truth, (*viz.*) their turning again to the weak and beggarly Elements in observing Days, and Months, and Times, &c.

and

and says, he fears that his labour on them hath been in vain ; but he exhorts them not to be entangled again with the Yoke of Bondage, but to stand fast in their Christian Liberty ; which plainly demonstrates, that the Christians in the Primitive Times were not to run into such things.

But some may say, *How then came all those Times and Days to be first observed, seeing it doth appear, that the Scriptures are silent in it especially ?*

Ans. Why ? Many, or most of them, have been brought in by the Pope and his Councils since the Apostles Days, as may appear by this following Table, Collected out of History.

A Table shewing the Authors of several No-
ted Days, with, or near, the Years when
first brought in, or established-

Anno	Days.	Authors.
390	The Feast of Trinity.	Gregory, Bish.
606	All Saints, All Souls.	Boniface IV.
640	Lent set up.	Po. Sev. time.
850	{ Assumption of the } { Virgin Mary. }	Pope Leo IV.
687	Purification V. Mary	Pope Sergius.
1225	John Baptist's Nativ.	Po. Greg. IX.
	{ Annunciation of } { the Vir. Mary. }	{ Coun. at } { Tolatain. }
1244	Corpus Christi.	P. Urban IV.
1286	The 4 Evangelists.	Boniface VIII.
1469	Conception V. Mary.	Sixtus IV.
	{ Christ's Nativit. }	
	{ John Evange- }	
	{ list, Innocents, }	
	{ Circumcision, }	
	{ Epiphany, with }	
	{ Easter, Ascen- }	
	{ sion, Pentecost, }	
1242	{ John Baptist, & }	{ Innocent IV. }
	{ the 12 Apo- }	{ and Coun- }
	{ stles Days, }	{ cil at Ly- }
	{ Lawrence, Mi- }	{ ons in }
	{ chael, called }	{ France. }
	{ Michaelmas, }	
	{ Martin, &c. }	

It is probable some may be willing to be informed, why I mention such days in the Calendar, because what is said of them is rather to bring People from observing of them than otherwise.

In Answer to this, I am willing to give a reason wherefore they are inserted as aforesaid, which is, because many, or most of them, are such on which there is more Traffick, as to Buying and Selling the Commodities of the Nation than on other days; for throughout the same are about 700 Places wherein Fairs are kept, and at most of those Towns are two, three, or four Fairs Yearly, which needs must be a great Number of Fairs, and many People in discourse about them, will say, there is a Fair at such a Place on St. Paul's day, or St. James's day, &c. without naming the day of the Month; and some perhaps not knowing it, and this is one chief end for which I have inserted them, that none concerned therein, might be ignorant when those days are. Also four of those days are greatly in use with us, as Quarter-days, or Principle-days observed between a

Landlord and his Tenant, as in making and dating of Leases, and giving or taking of Warning, &c. So I say upon this account, it is necessary to know when those days of Note happen, either Fixed or Moveable.

*Of the Names of the Seven Days of
the Week,*

The Antient Heathen *Romans* gave Names unto the days of the Week, according to the Names of the Seven Planets, whom they honoured as Gods and Goddesses, and those Names are still in great use in *Europe*.

And the Antient Heathen *Saxons* in Honour to their Idols named the days of the Week accordingly, which Names are still upheld by our Nation, although not to its Honour : But the Antient Scripture Names amongst the *Jews*, and Primitive Christians, are so far out of Knowledge in these days, that many People do not know them, or at least the right order of them, therefore I do put this small Table, which may serve to shew how every day answereth each other.

A Table of the Names of the Days of the Weeks according to

<i>the Heathen</i>		<i>the</i>
Romans.	Saxons.	Christians and Jews.
<i>Solis,</i>	<i>Suns</i>	<i>the first day</i>
<i>Lunæ,</i>	<i>Moons</i>	<i>the second day</i>
<i>Martis,</i>	<i>Tuescos</i>	<i>the third day</i>
<i>Mercurii,</i>	<i>Wodens</i>	<i>the fourth day</i>
<i>Jovis,</i>	<i>Thors</i>	<i>the fifth day</i>
<i>Veneris,</i>	<i>Frea's</i>	<i>the sixth day</i>
<i>Saturni,</i>	<i>Seaters</i>	<i>the seventh, or</i>
		<i>Jews Sabbath</i>

Gen. 1. 5, 8, 13, 19, &c. Mat. 28. 1.
 Mar. 16. 2. Luk. 24. 1. Joh. 20. 1.
 1 Cor. 16. 2. Act. 20. 7.

So, of the Names that the Saxons gave unto the days of the Week, I have Collected a few words out of the Antiquities of *R. Verstegan*.

He speaking of divers Idols which they Adored, and amongst the rest these Seven.

First then, (saith he) unto the Day Dedicated unto the especial Adoration of the Idol of the Sun, they gave the Name of *Sunday*, (*viz.*) the *Suns-day*, or day of the Sun. This Idol was placed

ced in a Temple, and there Adored and Sacrificed unto, for that they believed, that the Sun in the Firmament did with or in this Idol correspond or co-operate. It was made like the upper half of a Naked Man set on a Pillar, his Face representing the Sun, he holding a Burning Wheel before his Breast, signifying the course which he runneth about the World.

The next in course of days was the Idol of the Moon, whereof we yet retain the Name of *Monday* instead of Moon-day; which Idol seems strange, being made for a Woman, having a Coat like a Man, and a Hood on her Head, with two long Ears, and on her Feet spiked Shoes, holding the Image of the Moon before her.

The next unto the Idols of the two most apparent Planets, was the Idol of *Tuesco*, the most Ancient and peculiar God of all the *Germans*, described like an Old Man with a Bald Head, having on a Garment of Skin, unto him was the Third day of the Week Dedicated, and called *Tuesday*, which Name yet is retained with us.

The next was the Idol *Woden*, who is described like a Warriour, being clad in Armour, with a Naked Sword in his Hand, and esteemed amongst them for their God of Battel, being a most Valiant and Victorious Prince, and his Idol after his Death was Honoured, Prayed, and Sacrificed unto, that by his Aid they might obtain Victory over their Enemies, which when they had obtained, they Sacrificed unto him such Prisoners as in Battel they had taken; and unto him was the fourth day of the Week Dedicated, and called *Wedensday*, instead of *Wodensday*, upon which day he was chiefly Honoured.

The next in order was the Idol *Thor*, being of more Estimation among them than many of like sort, being as if he were set, or rather lying on a covered Bed; on his Head he wore a Crown of Gold, and round about it was set or fixed Twelve Bright Golden Stars, holding a Scepter in his Right Hand. He was believed to have Dominion both in Heaven and Earth; and that in the Air he governed the Winds and Clouds, and being displeased, did
cause

cause Lightning, and Thunder, and Tempest, and all ill Weather; but being pleased, they supposed he sent them good and seasonable, and caused abundance of Corn, and Fruit to grow. So upon the fifth day of the Week he was Adored, and from him came the Name *Thursday* or *Thorsday*.

The next following was the Goddess *Friga*, whose Idol represented both Sexes, as well Man as Woman, being very strangely Attired; in her Right Hand she held a drawn Sword, and in her Left a Bow; she was reputed the Giver of Peace and Plenty, and also the Causer of Love and Amity; being placed in a great Hall on one side of *Thor*, and *Woden* on the other side. So from this Idol *Friga*, or as some called her *Frea*, was the sixth day of the Week called *Freaday* or *Friday*.

The next and last of the Seven was the Idol *Seater*, by some supposed to be *Saturn*, represented like an Old Grave Man with a long Garment girt about the middle, bare-headed and bare-footed, standing on the back of a Peach, having in his Right Hand a Pail of Water with Flowers and Fruits, and

and in his Left Hand a Wheel held up, all which had their significations ; and unto him was the seventh day of the Week Dedicated and called *Saturday*.

Thus much I thought fit to mention touching the first naming of the days of the Week, (as I have done before of the Months) that the Christians may see how far they are short in this particular from Scripture Example.

Now for as much as this Manual is designed to supply the use of a Common Annual Almanack, I think it is very convenient here to speak of divers Necessary Things belonging to the Moon, and her Motions : But before I can proceed Intelligibly unto many, I shall first insert a Table, shewing the Characters, Names, Natures, &c. of the Twelve Signs, Seven Planets, and Five Aspects, with other Things suitable to such a Work ; as it is the received Opinion and Judgment of divers Astronomers and others, in this Matter.

A Table of the 12 Signs, 7 Planets, and 5 Aspects, with their Characters, Names, Natures, and Significations.

Cha.	Nam.	Parts Govern.	Natures.	
1	♈ <i>Aries.</i>	Head & Face.	hot & dry.	fiery.
2	♉ <i>Taur.</i>	Neck & Thr.	cold & dry.	earthly
3	♊ <i>Gem.</i>	Arms & Shou.	hot & moist.	airy.
4	♋ <i>Canc.</i>	Breast & Sto.	cold & moist.	watry.
5	♌ <i>Leo.</i>	Heart & Back.	hot & dry.	fiery.
6	♍ <i>Virgo</i>	Bowe. & Belly.	cold & dry.	earthly
7	♎ <i>Libra</i>	Reins & Loin.	hot & moist.	airy.
8	♏ <i>Scorp.</i>	Secret Memb.	cold & moist.	watry.
9	♐ <i>Sagit.</i>	Thighs, Hips.	hot & dry.	fiery.
10	♑ <i>Capri.</i>	Knees, Hams.	cold & dry.	earthly
11	♒ <i>Aqua.</i>	Legs.	hot & moist.	airy.
12	♓ <i>Pisces.</i>	Feet.	cold & moist.	watry.

Ch.	Planets Names.	Natures.	In what time they make their Revolu.
1	♄ <i>Saturn.</i>	cold & dry.	in 30 Years.
2	♃ <i>Jupiter.</i>	hot & moist tem.	in 12 Years.
3	♂ <i>Mars.</i>	hot & dry.	in 23 Months.
4	♌ <i>Sol.</i>	hot & dry tem.	in 1 Ye. or 365 d.
5	♀ <i>Venus.</i>	cold & moist.	in the same time.
6	☿ <i>Mercury</i>	cold & dry var.	in the same time.
7	☾ <i>Luna.</i>	cold & moist.	in 27 days 8 hou

Ch.	The Five Aspects.		
1	♌ <i>Conjunction.</i>	When two Planets are	in one sign and degree.
2	* <i>Sextile.</i>		dist. 2 signs or 60 deg.
3	□ <i>Quartile.</i>		dist. 3 signs or 90 deg.
4	△ <i>Trine.</i>		dist. 4 sig. or 120 deg.
5	♌ <i>Opposition.</i>		dist. 6 sig. or 180 deg.
6	♏ <i>Dragons Head.</i>	Two opposite Points in the Eclipt. Line, call'd Nodes.	
7	♐ <i>Dragons Tail.</i>		

This foregoing Table (I suppose) is so easie to understand, that I need not say much to explain it, for the Titles at top demonstrate its signification. And the Characters ought to be perfectly known in order to proceed.

Now as to the Moon and her Motions, it is to be understood that she is supposed to be a round dark Body, having no light of her self, but only such as she receives from the Sun; her daily motion from East to West, she makes in 24 Hours and about 48 Minutes, but her own mean motion, which is from West to East, is about 13 degrees 11 minutes in 24 hours. And she passeth through the 12 Signs of the Zodiack in 27 days 8 hours, in which time the Sun by his natural motion is nearer the East by about 27 degrees, since the last Conjunction with ♄, and the Moon is in overtaking of him again, 2 days, 4 hours, 44 minutes, so that between Change and Change, there is 29 days, 12 hours, 44 minutes, according to the Moons mean, or middle motion, although in her swift motion she cometh to a Conjunction with the Sun sooner by near 12 hours, and in her slow
motion.

motion near 12 hours later: and note, that her three motions depend upon 2 Points; her slow motion when she is farthest from the Centre of the Earth, is called her *Apogæon*, and her swift motion, when she is nearest the Centre of the Earth is called her *Perigæe*, and these 2 Points being opposite to each other, which Points are usually placed in many Almanacks, in the last Column of the Left Hand page, amongst the Planets, mutual Aspects, under those Names, *Apog.* for her slow motion, and *Perig.* for her swift motion, and her mean motion is between these two.

Of the Latitude of the Moon, and the Dragons Head, and Dragons Tail.

The Moon is said to have latitude, when she goeth either North or South from the Ecliptick, which sometimes she doth above 5 degrees, (but the Sun is constantly upon it) and if the Moon were so too, there would, I suppose, be an Eclipse of the Moon at every Full, or Opposition, and an Eclipse of the Sun at every Change or Conjunction; but

Solstice, the time when the Sun returns to be at a stand, Midwinter, and Midsummer.

but this never happens but when the Moon crosseth the Ecliptick at either ϕ or δ with \odot , and then she is said to be in the Head or Tail of the Dragon, or within 10 degrees of it; so to find out her Latitude, it is first requisite to find out what sign the α or γ is in; for when the γ crosseth the Ecliptick from South to North, she is in the α ; and as she cometh 3 Signs, or 90 deg. farther, she is in her greatest North Latitude; then when she is six Signs, or 180 deg. from α , she crosseth the Ecliptick again from North to South, and is in the γ , so passing 3 Signs also more, comes to have her greatest South Latitude. Note also, that the Dragons Head, or *Caput Draconis*, and the Dragons Tail, or *Cauda Draconis*, are two opposite Points in the Ecliptick (as is said) and pass through the 12 Signs in near Nineteen Years, and through one Sign in near 19 Months, and through one degree in about 19 days, but their motion is backward, and contrary to the Moons Auge, for the α passeth from *Aries* into *Pisces*, so into *Aquary*, and from thence into *Capricorn*, and so backwards through the

12 Signs. And for to find it out some succeeding Years, I have here inserted a Table, shewing about what time the ☾ enters every Tenth degree of the 12 Signs, by which the rest of the degrees may be easily found out to answer the use intended, (*viz.*) to know the Moons Latitude.

G.N.	Si. & De.	Day.	Mon.	Si. & De.	Day.	Mo.
1	♈ 10	25	11	♈ 0	14	5
2	♈ 20	20	11	♈ 10	27	5
3	♈ 0	1	12	♈ 20	8	6
4	♈ 10	13	12	♈ 0	19	6
5	♈ 20	24	12	♈ 10	1	7
6	♈ 0	6	1	♈ 20	11	7
7	♈ 10	19	1	♈ 0	23	7
8	♈ 20	30	1	♈ 10	4	8
9	♈ 0	10	2	♈ 20	16	8
10	♈ 10	22	2	♈ 0	27	8
11	♈ 20	4	3	♈ 10	9	9
12	♈ 0	17	3	♈ 20	22	9
13	♈ 10	30	3	♈ 0	6	10
14	♈ 20	12	4	♈ 10	17	10
15	♈ 0	24	4	♈ 20	30	10
16	♈ 10	7	5			
17	♈ 0	10	11	♈ 20	18	5
18	♈ 10	23	11	♈ 0	29	5
19	♈ 20	3	12	♈ 10	11	6

The Table Explained.

It doth consist of 7 Columns, the first towards the Left Hand is the Prime, or Golden Number, the second is the Sign and Degree, the third is the Day of the Month, and fourth is the Months that the \odot is in; the last three are of the same signification, for twice in every Year it is repeated, except when the Prime is 16, and then it falls but once.

An Example.

For the Year 1695. I find 5 to be the Golden Number, and against it is 7, 20 in the first Column, 24 in the second, and 12 in the third, which intimates that the \odot is 20 degrees in 7 the 24th day of the 12th month. And also the last three Columns intimates, that the \odot is 10 degrees in the same Sign the 1st day of the 7th Month; so in like manner is all the rest to be understood, until the Circle of the Moon, or Golden Number is compleated; and any other Number of degrees is easie to
be

be found, counting but from the degree set here, 19 days for one, 8 Weeks for 3, &c. but as the days in the Year si counted forward, the degrees must be counted backward, as before, when Ω is 10 deg. in \uparrow , that is the 1st of the 7th Month, upon the 20th of the same Month we may judge the Ω to be but 9 deg. in \uparrow , and about the 9th of the 8th Month to be in 8 deg. &c. Now to find the Latitude of Δ , observe the sign the Ω or \varnothing is in, as in this Example the Ω is in \uparrow , and the \varnothing in Π , the opposite sign, and the Δ being in either of the two places she hath no Latitude, but as she passeth out of \uparrow into ω , she begins to have North Latitude, and in \approx her Latitude is greater, but in \times greatest; so then by degrees as she comes into γ and \varnothing her Latitude diminisheth, until she come into Π , then into \ominus , Ω , \wp , where is her greatest South Latitude, so into \approx and m , where her Latitude is smaller, until she come into \uparrow again; so this Rule may be sufficient for many Uses, as for finding out High-water, &c. and observe, the greatest difference that the Δ 's Latitude

itude makes, as to this, is about the East and West Points, and there it is about half a Point of the Compass on either side of the Ecliptick, which makes about 20 Minutes in Time, and the farther from thence, the lesser, so that there is none at all in the South and North Points.

Of the Change, Age, Quarters, and Full Moon.

Something hath been already said concerning the M's Change, and how to find it, in page 14. which being found, add 7 days 9 hours to it for the first quarter, and 14 days 18 hours for the Full Moon, and for the last quarter add 7 days 9 hours more, which is 22 days 3 hours. I purposely omit the odd minutes, because they are somewhat troublesome to be added together, and in a manner useless in some Cases; sometimes this Rule differs something from the true time, but is most agreeable to the M's middle motion.

And

And at any time to find the D 's Age, take this Example ; Suppose it be required to know the D 's Age the 14th of the 3d Month 1695. this Year the Prime is 5, so turn to the Month, and in the 3d Column against the 2d day of the Month 5 is to be found, and against it is 16, which intimates that the D Changes on the 3d day about 4 in the morning, so then on the 14th day about the same hour, counting from the Change are 11 days, which is the D 's Age, the thing required, and is very necessary in finding out her time of coming to the South, and the time of High-water in divers Ports about the Nation, and to find out her distance in signs and degrees from \odot , whereby her place in the Zodiack is also found out ; and in order thereunto I have set this following Table, which is divided into 6 Columns, the first hath the days of the Moons Age, the second hath the hour and minute of her coming to the South, and the third hath the hour and minute of her shining, the fourth hath her distance from the Sun in signs and degrees, and the Aspects that she makes with

with him, and the fifth hath her distance from her Conjunction with the Sun in signs and degrees, according to her daily motion, and the sixth hath the degrees according to her hourly motion; all these are found out by her Age.

E

A

A Table shewing the Δ s coming to the South in
Hours and Minutes, and the time of her Shining,
her distance from the Sun, and her motion in sig. and deg. from her \odot with \odot d. & h.

Δ s	Δ Sout.		Δ Shin.		Δ Di. \odot		Δ sd. m.		Δ ho. m.
Age.	H.	M.	H.	M.	S.	D.	S.	D.	Degrees
0	12	0	0	0	0	0	0	0	0
1	12	49	0	49	0	12	0	13	0
2	1	38	1	38	0	24	0	26	1
3	2	26	2	26	1	6	1	9	1
4	3	15	3	15	1	18	1	23	2
5	4	3	4	3	2	*	0	2	2
6	4	53	4	53	2	12	2	19	3
7	5	41	5	41	2	24	3	2	3
8	6	30	6	30	3	□	6	3	4
9	6	19	7	19	3	18	3	29	4
10	8	8	8	8	4	△	0	4	5
11	8	56	8	56	4	12	4	25	6
12	9	45	9	45	4	24	5	8	6
13	10	34	10	34	5	6	5	21	7
14	11	23	11	23	5	18	6	4	7
15	2	11	12	11	6	0	6	18	8
16	11	0	11	12	6	12	7	1	8
17	1	49	10	24	6	24	7	14	9
18	2	38	9	36	7	6	7	27	10
19	3	26	8	48	7	18	8	10	10
20	4	15	8	0	8	△	0	8	11
21	5	3	7	12	8	12	9	7	11
22	5	53	6	24	8	24	9	19	12
23	6	41	5	36	9	□	6	10	12
24	7	30	4	48	9	18	10	16	13
25	8	19	4	0	10	*	0	10	29
26	9	8	3	12	10	12	11	13	
27	9	56	2	24	10	24	11	27	
28	10	45	1	36	11	6	12	2	
29	11	34	0	48	11	18	12	21	
30	11	58	0	0	11	24	13	0	

The Explanation and Use of every particular Column in the foregoing Table.

The first Column (as I said) hath the days of the ☽s Age, which easily may be found out by the former Directions, then enter the Table with the same, under ☽ Age, and from it toward the Right Hand, is every particular matter mentioned under their proper Titles.

As for Example.

The ☽ being 11 days old, and her Age found in the Column aforesaid, and against it under ☽ South is 8 hours 56 minutes in the Afternoon, which intimates that the ☽ is then South, (I look upon this Table to be as exact as most general Tables are, although it may sometimes differ from the true time, some odd minutes, considering the ☽s place and latitude, as all do that ever I observed yet) but for the more exactness in this, it doth require the hours as well as days, that is, to every hour of her Age above even days

add 2 minutes ; as suppose the Δ to be 11 days 16 hours old, for the 16 hours add 32 minutes to 56 minutes, as before, which in all makes 9 hours 28 minutes, that by this Rule the Moon should be South.

It may be indifferently found out by Arithmetick thus, multiply the Δ s Age by 12, and the Product divide by 15, so the Quotient will shew the hour of the Δ s Southing ; if any remain, multiply by it 4, which will be minutes to be added to the hours.

Example.

The Δ being 19 days old, multiply 19 by 12, the Product is 228, which divide by 15, and the Quotient will be 15, and remainder 3, which 3 multiply by 4, makes 12, all is 15 hours 12 minutes, 12 hours being taken away, (which always must if it exceed 12) and 3 hours 32 minutes remains, which is the time, as several Tables shew.

The Knowledge of the Δ s Southing is very necessary for some purposes, as to know the time of High-water at any Port, and the hour of the Night by her shining

shining upon a Sun-dial, also her rising and setting; so of all these in order.

And first, a Tide-table, shewing what point of the Compass the ☽ being in, maketh full Sea at divers Ports about and near *England*, also the hour and minutes to be added to the ☽s Southing, for the time thereof.

E 3

Point

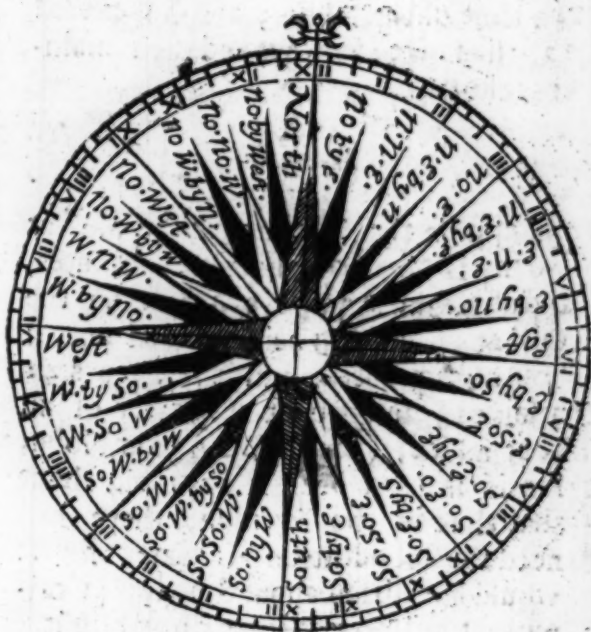
Point of the Comp.	Names of the Havens.	H. M
S. and N.	Isle of Wight, Quinborough, Southampton, Portsmouth, the Spiis, Beachy, Sleeve, between Scilly and Ushant.	00 00
S. by W. N. by E.	Black tail, and the Nowre, Rochester, Maldon, Redban, Aberdeen.	00 45
S. S. W. N. N. E.	Gravesend, Downs, Tenet, Rumney, Silly, Rankins, Senihead.	01 30
S. W. by S. N. E. by N.	St. Andrews, Dundee, Bell-Isle, Holy-Isle.	02 15
S. W. N. E.	London, Whitbay, Hartlepool, Tinnmouth.	03 00
S. W. by W. N. E. by E.	Berwick, Flushing, Flamborough-head, Bridlington-Bay.	03 45
W. S. W. E. N. E.	Severn, Scarborough, Quarter-tide, Kinsale, Cork, Baltimore, Calice.	04 30
W. by S. E. by N.	Falmouth, Foy, Humber, Newcastle, Lizard.	05 15
E. and W. E. by S.	Plimouth, Hull, Lynn, St. Davids, Lundy.	06 00
W. by N. E. S. E.	Bristol, Startpoint, Waterford.	06 45
W. N. W. S. E. by E.	Milford, Bridgwater, Landsend, Texel.	07 30
N. W. by W. S. E. N. W.	Portland, Harflew, Dublin, Hague.	08 15
S. E. by S. N. W. by N.	Pool, Man-Isle, Dunbar, Orkney, Needles, Orford, S. and N. Foreland.	09 00 09 45
S. S. E. N. N. W.	Yarmouth, Dover, Harwich, Bulloin.	10 30
S. by E.	Rye, Winchelsey, Calshot, Gorend.	11 15

This Table being so easie, I need not say much to explain it, only the two last Columns with H. M. at top, are the Hours and Minutes to be added unto the Δ s Southing, in this manner; by the former Example the Δ was 11 days old, then she being South at 8 hours 56 minutes, as is said, then look out the place in the Table desired, and add the time thereto: As suppose it were *London* or *Tinmouth*, then add 3 hours, and it will make 11 hours 56 minutes, for the time of full Sea, and the Δ South-west or North-east, the like is to be done with the other Havens or Ports, only note, that the Neap-tides which are about the Δ s quarters, are smaller than those that are at Full or Change, (which are called Spring-tides) and therefore are sooner sometimes by an hour, also great Rains and Winds, as it may fit, may hasten or retrade the Tides; and as for the Δ being in such a Point of the Compass to make High-water, it doth not always fall so, for when she is in Δ s, and hath North Latitude at either Full or Change, she comes to the South-west Point about an hour and half sooner than the time

is set for High-water at *London*, therefore regard ought to be had to the *Ds* place and latitude, where exactness is required; and it must be done for every day throughout the Year, as some Almanacks have it; but that way is as near to the Truth that I have hereafter inserted, as any general way that I know of, and therefore may be sufficient for Vulgar Use, considering what shall be said of it.

And because I have put the Points of the Mariners Compass in the former Table, and perhaps some are Ignorant how one Point lyeth from another, which by this Figure is shewed.

The Mariners Compass, or 32 Points of the Wind.



*To find the Hour of the Night, by the D
shining upon a Sun-dial.*

First find out the D's Southing, as is
before taught, then add to it about a
quarter or half an Hour, as it is early

E 5 or

or late in the Night, then add the South-
ing of the ☽, and the shadow of the
☽ upon the Dial together, and that is
the time of the Night; and if it exceed
12, then take 12 away, and the remain-
er is the time.

Example.

Suppose the ☽ being 7 days old at
Noon, is South at 5 hours 41 minutes,
and at Night I find the shadow on the
Dial at 3, which 3 being added unto 5
hours 41 minutes, and it is 8 hours 41
minutes, and about a quarter of an
hour added, (for the ☽s Age at Noon,
for if she had been 7 days old about
that time in the Evening, there had
needed no addition of time, for it
would have been about 8 hours 41 mi-
nutes) but now it is near 9 at Night.

To find the ☽s Rising and Setting.

Some suppose the Southing of the ☽
after the ☉, to be equal with the set-
ting of the New ☽ after ☉ set, and
with the rising of the full ☽ also, which
often is false, for many times the ☽ ri-
seth

seth 3 or 4 Nights within an hours time, and letteth in like manner.

Therefore to know this, after her Southing is found, find out the sign and degree she is in, (which to do is hereafter taught) so that being found, find also what time the Sun is there, then observe the time of Sun-setting in that place, and that is half the continuance of the ☉ or ☽ above the Horizon, which being added unto the ☽s Southing, sheweth the time of her setting, and subtracted from it, sheweth the time of her rising.

An Example.

Upon the 21th of the 7th Month 1694. by the former Rule; I find the ☽ to be 12 days old, and at that Age to be South 9 hours 45 minutes in the Afternoon, then by the following Rule she is found to be in 20 degrees of ♋; so the ☉ being in the same sign and degree about the last day of the 12th Month, and then he sets about 36 minutes after 5, but the 12 days of ☽ are expired about 8 in the morning, according to her Change, therefore 17 minutes must be added to it, for 73 hours.

hours and a half, that the ☾ is old above the 12 days, and that makes 10 hours 12 minutes, then by the following Rule she is found to be 20 degrees in ♋; so the ☉ being in the same sign and degree about the 28th of the 12th Month, and then sets 5 hours 36 minutes, which 5 hours 36 minutes being added to 10 hours 12 minutes makes 15 hours 48 minutes, then 12 hours being subtracted, the time is 3 hours 48 minutes in the morning, but to make the Work seem more plain, take notice of this Calculation.

	H.	M.
First, the Moon being 12 days	09	45
is South		
And 13 hours more	00	27
	<hr/>	
Which being added, makes	10	12
	<hr/>	

Secondly, the Moon being in 20 degrees of ♋, and the ☉ being there, sets at

This subtract shews her rising in the Afternoon to be

But added, shew her setting to be

Which casting 12 away, is morning

Of

Of the ☾ Distance from the Sun;

This being meant according to her own middle motion, and the Suns motion also; for as the ☾ goeth 13 degrees of the Zodiack in 24 hours (without having regard unto the 11 odd minutes) the Sun in the like time goeth one degree, then the Moon gaineth 12 degrees daily of the Sun, which fourth Column of the aforesaid Table shews; and also when she cometh to an Aspect with the Sun, so as her Age is, her distance from ☉ in signs and degrees is found.

Example.

The Moon being 8 days old, her distance from ☉ is required, 8 being found in the first Column of her Age, and from 8 under ☾ distance ☉, is 3 ☐ 6, which demonstrates the ☾ at that Age to be 3 signs 6 degrees distance from ☉, and 6 degrees past a square Aspect with him. It is so easie that it needs no more to be said of it, therefore I shall pass to the next Column, which is, *of*

Of the ☿s Motion from the place of ☿ with ☉.

Now the ☿s mean motion daily is about 13 degrees 11 minutes, (as is before said) and this Column hath it in signs and degrees throughout her Age, according to her daily motion; and the next little Column hath the degree according to her hourly motion, which may be supplied by the first Column of her Age, counting unto 24 for the 24 hours, and these two Columns chiefly are to find out what sign and degree the ☿ at any time is in.

Now at every New ☿ she is in the same sign and degree that the ☉ is in, and at any desired time to find her place, having her Age in days and hours, add the signs and degrees against it, to the place of the ☉ at the Change, and it will be the place of the ☿ in the Zodiack.

Example.

In the Year 1695. the 18th day of the 4th Month at 9 in the Evening, I desire

desire to know the γ s place in the Zodiac, or what sign and degree she is in; I find by the aforesaid Rule the γ Changes the first day of that Month at 5 in the Afternoon, so on the 18th day (at that hour she is 17 days old, but the time required is 4 hours more; now observe the \odot at that time to be in 20 degrees of Π , and then the γ is there also; and her Age, which is 17 days, being found, look in the Column of her motion, and against it, is 7 signs 14 degrees, and against 4 in the first Column for the hours is 2 degrees more in the little Column of her hourly motion, which being added to 14 makes 16; so her whole distance being 7 signs 16 degrees from the place of \odot with \odot , which count thus, \odot in Π 20 degrees, ♄ 1, ♅ 2, ♆ 3, ♇ 4, ♈ 5, ♉ 6, ♊ 7, then add the 20 and 16 degrees together, and it is 36, which is 6 degrees above another sign, and falls so many degrees in ♈ , being the Answer to the Question proposed.

A Table shewing what Sign the Moon
is in, knowing her distance from
the Sun.

	1	2	3	4	5	6	7	8	9	10	11
♈	♈	♈	♈	♈	♈	♈	♈	♈	♈	♈	♈
♉	♉	♉	♉	♉	♉	♉	♉	♉	♉	♉	♉
♊	♊	♊	♊	♊	♊	♊	♊	♊	♊	♊	♊
♋	♋	♋	♋	♋	♋	♋	♋	♋	♋	♋	♋
♌	♌	♌	♌	♌	♌	♌	♌	♌	♌	♌	♌
♍	♍	♍	♍	♍	♍	♍	♍	♍	♍	♍	♍
♎	♎	♎	♎	♎	♎	♎	♎	♎	♎	♎	♎
♏	♏	♏	♏	♏	♏	♏	♏	♏	♏	♏	♏
♐	♐	♐	♐	♐	♐	♐	♐	♐	♐	♐	♐
♑	♑	♑	♑	♑	♑	♑	♑	♑	♑	♑	♑
♒	♒	♒	♒	♒	♒	♒	♒	♒	♒	♒	♒
♓	♓	♓	♓	♓	♓	♓	♓	♓	♓	♓	♓

But for the more ready reckoning or
finding the ☾s place observe this little
Table; its use is, having the number
of signs and degrees that the Moon is
from the place of ☿ with ☉ as before,
find their number in the row of Figures
at the top, and the sign as the ☾ was
in at ☿, in the first Column on the
Left Hand, and in a straight Line to-
wards the Right Hand, under the Fi-
gure for the number of signs, is the sign

required ; but note, the degrees must be added together (if any be) and if they exceed 30, then one sign more must be added, and so many degrees, as exceeds 30, as in this Example ; ☉ in Π 20 degrees, ☽s distance 7 signs. 16 degrees, look under 7, and straight from Π is ν , as it was before, and 16 and 20 added together is still the same, (viz.) \approx 6 degrees the ☽s place ; so the like is to be done at other times, as occasion requires.

Of the time of the ☽s Shining.

Now as for the ☽s shining, it is to be understood, that it is meant the time that she remains above the Horizon after Sun-setting, between Change and Full, and the time that she is above the Horizon before Sun-rising, from Full to Change ; and to find it out after the most usual way, having her Age, peruse the Table before in page 62. and 3d Column under ☽s shining, and that shews the time in hours and minutes.

Example.

The ☽ being 13 days old, how long doth she shine ? Find 13 in the first Column for her Age, and against it is 10 hours 34 minutes, which is for the quantity of her shining ; but this Rule is not always perfect, but sometimes it is too much, and sometimes too little ; therefore to find the true time, regard also ought to be had to what place in the Zodiack she is in.

A Table shewing the Time off
High-water at *London-Bridge*.

Ds Age.	Comm. Rule.		Corrected.	
	H.	M.	H.	M.
0	3	0	3	0
1	3	48	3	48
2	4	36	4	31
3	5	24	5	14
4	6	12	5	52
5	7	0	6	30
6	7	48	7	3
7	8	36	7	36
8	9	24	8	24
9	10	12	9	27
10	11	0	10	30
11	11	48	11	28
12	12	36	12	26
13	1	24	1	19
14	2	12	2	12
15	3	0	3	0
16	3	48	3	48
17	4	36	4	31
18	5	24	5	14
19	6	12	5	52
20	7	0	6	30
21	7	48	7	3
22	8	36	7	36
23	9	24	8	24
24	10	12	9	27
25	11	0	10	30
26	11	48	11	28
27	12	36	12	26
28	1	24	1	19
29	2	12	2	12
$\frac{1}{2}$	3	0	3	0

Explanation.

The time of this is contained in a Corrected manner in the last Column, but in the Column before it is the general Rule, which is taken to be about 3 hours after the Δ s Southing; yet this Rule doth not hold true always, for it is sometimes High-water above an hour sooner than the time set, especially the Neap-tides, when the Δ is about 7, or 22 days old, which Error hath need of a Correction, therefore I have inserted another Corrected Column, which is much nearer to the truth than the other, though there is no general Table that can be made so exact, but it will have some Errors; so where exactness is required, due regard ought to be had to the Δ s Latitude, and what Point the Wind is in, and its strength, which if it be bearing about the North, and strong, it mightily hastens the Tide; so the South and South-west Wind retards it; and the like Errors (I suppose) do happen in other Ports as the Wind may bear; but for to find out High-water at *London*,
find

find the ☽s Age in the first Column, and in a straight Line from it, under the Title, is the hour and minute for both Common and Corrected.

Example.

The ☽ being 9 days old, it is High-water by the Common account 10 hours 12 minutes, but by the Corrected account 9 hours 27 minutes, which is sooner by three quarters of an hour than the other.

Of the Sun and his Motions, and other Things depending on it.

The Sun is the chief and principal Object of our Natural sight, the supposed Centre of the Planetary Orbs, whose Magnitude, according to Mathematical Demonstration, is thought to be above 130 times bigger than the Earth, and by whose sweet influence and gentle heat (under the All-wise Creator of All Things) both Animals and Vegetables are generated and revived, and by whose motion is caused Winter and Summer, Spring and Harvest, Day and Night, and by which is mea-

measured unto us Years, Months, and Days, &c. Gen. 1. His daily motion from East to West is in 24 hours, as other Stars do; but his own proper mean motion, which is from West to East in going through the Zodiack, is somewhat less than a degree daily, (*viz.*) about 59 minutes 8 seconds, thereby making the Year to consist of 365 days, 5 hours, 49 minutes, and some seconds, &c. which is called an Equal Tropical Year, and takes its beginning when the ☉ enters the first point of ♈, and ends when he touches the same Place again.

Now the ☉ also hath 3 motions; (*viz.*) slow, swift, and mean; his slow motion is, when he is in the Point called his Auge, or Apogee, which falleth about the latter end of the 4th Month; and his swift motion is, when he is opposite thereto, or Perigee, which is about the latter end of the 10th Month; and his mean motion is about the middle between these two, (*viz.*) about the latter end of the 1st Month, and latter end of the 7th Month, by which motions the Equinoctial Points are not of equal distance,
for

for the Sun is 7 days more in going from the Vernal Equinox, (which is the 10th of the 1st Month) to the Autumnal, (which is the 12th of the 7th Month) than he is in going from the Autumnal Equinox to the Vernal; for in the first are 186 days, and in the last are 179 days: Now according to these motions of \odot , there are several things appertaining thereto, as, his right Ascension, Declination, Amplitude, Altitude, &c. of all these I shall speak in order; and first,

Of the Sun's Right Ascension.

Which is a certain number of degrees and minutes, or hours and minutes comprized between the first Point of γ , and the place of the Sun upon the Meridian: As suppose the Sun or any Star should be at the first Point of γ , then they would have 1 hour 54 minutes of Right Ascension; and if they should be in 8 degrees of Ω , then their Right Ascension would be in time 8 hours and 42 minutes, for every 3 signs hath 90 degrees, and is equal in the Equinox to 6 hours of time, and every

every degree hath 30 minutes, and is equal to about 4 minutes of time: So this following Table shews the Sun's Right Ascension in hours and minutes every day throughout the Year; first, by finding the day of the Month in the first Column, and in a Line from it under the Month desired, is the hours and minutes.

A Table of the Sun's Right Ascension in Hours and Minutes.

Days.	1 Mo.		2 Mo.		3 Mo.		4 Mo.		5 Mo.		6 Mo.	
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
1	23	28	01	21	03	14	05	19	07	23	09	25
2	23	32	01	25	03	18	05	23	07	27	09	29
3	23	36	01	29	03	22	05	27	07	31	09	33
4	23	39	01	33	03	26	05	31	07	35	09	37
5	23	43	01	36	03	30	05	35	07	39	09	41
6	23	47	01	40	03	34	05	40	07	43	09	44
7	23	50	01	44	03	38	05	44	07	47	09	48
8	23	54	01	47	03	42	05	48	07	51	09	52
9	23	57	01	51	03	46	05	52	07	55	09	55
10	00	01	01	54	03	50	05	56	07	59	09	58
11	00	05	01	58	03	54	06	00	08	03	10	02
12	00	08	02	02	03	58	06	04	08	07	10	06
13	00	12	02	06	04	02	06	08	08	11	10	10
14	00	15	02	10	04	06	06	12	08	15	10	14
15	00	19	02	13	04	10	06	17	08	19	10	17
16	00	23	02	17	04	14	06	21	08	23	10	21
17	00	26	02	21	04	18	06	25	08	27	10	25
18	00	30	02	25	04	22	06	29	08	31	10	29
19	00	33	02	29	04	26	06	33	08	35	10	33
20	00	37	02	32	04	30	06	38	08	39	10	36
21	00	41	02	36	04	34	06	42	08	43	10	40
22	00	44	02	40	04	38	06	46	08	47	10	43
23	00	48	02	44	04	42	06	50	08	51	10	46
24	00	52	02	48	04	46	06	54	08	55	10	50
25	00	56	02	51	04	50	06	58	08	58	10	54
26	00	59	02	55	04	54	07	02	09	02	10	57
27	1	3	02	59	04	58	07	6	09	06	11	01
28	1	7	03	03	05	02	07	10	09	10	11	04
29	1	11	03	07	05	06	07	14	09	14	11	08
30	1	14	03	10	05	11	07	19	09	18	11	11
31	1	17	03	14	05	15	09	22	09	22	11	15

A Table of the sun's Right Ascension in Hours and Minutes.

Days.	7 Mo.	8 Mo.	9 Mo.	10 M.	11 M.	12 M.
	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
1	11 19 13	08 15 07	17 15 19	34 21 42		
2	11 23 13	12 15 11	17 20 19	38 21 46		
3	11 26 13	15 15 15	17 24 19	43 21 50		
4	11 30 13	19 15 19	17 29 19	47 21 54		
5	11 34 13	22 15 23	17 34 19	51 21 58		
6	11 38 13	26 15 27	17 38 19	56 22 02		
7	11 41 13	30 15 31	17 42 20	00 22 06		
8	11 44 13	34 15 36	17 47 20	04 22 10		
9	11 48 13	38 15 40	17 51 20	09 22 14		
10	11 51 13	41 15 44	17 55 20	13 22 17		
11	11 55 13	45 15 49	18 00 20	17 22 21		
12	11 59 13	49 15 53	18 04 20	22 22 25		
13	12 02 13	53 15 58	18 08 20	26 22 29		
14	12 06 13	57 16 02	18 13 20	30 22 33		
15	12 09 14	00 16 06	18 18 20	34 22 37		
16	12 13 14	04 16 11	18 23 20	38 22 40		
17	12 17 14	08 16 15	18 27 20	42 22 44		
18	12 20 14	12 16 19	18 32 20	46 22 48		
19	12 24 14	16 16 23	18 36 20	50 22 52		
20	12 28 14	20 16 28	18 41 20	54 22 55		
21	12 31 14	24 16 32	18 45 20	58 22 59		
22	12 35 14	28 16 36	18 49 21	03 23 03		
23	12 38 14	32 16 40	18 54 21	07 23 06		
24	12 42 14	36 16 44	18 58 21	11 23 10		
25	12 46 14	39 16 49	19 03 21	15 23 14		
26	12 49 14	43 16 53	19 07 21	19 23 17		
27	12 53 14	47 16 57	19 11 21	23 23 21		
28	12 57 14	51 17 02	19 16 21	27 23 25		
29	13 01 14	55 17 06	19 20 21	31		
30	13 04 14	59 17 11	19 25 21	35		
31	13 08 14	03 17 15	19 29 21	38		

A Table shewing the Suns declination for every degree of the Ecliptick.

Degr.	♈		♉		♊		Degr.
	D.	M.	D.	M.	D.	M.	
0	0	00	11	30	20	13	30
1	0	23	11	52	20	26	29
2	0	48	12	13	20	38	28
3	1	12	12	33	20	50	27
4	1	35	12	54	21	1	26
5	1	59	13	14	21	12	25
6	2	23	13	34	21	23	24
7	2	47	13	54	21	33	23
8	3	11	14	13	21	43	22
9	3	35	14	33	21	52	21
10	3	59	14	52	22	2	20
11	4	22	15	11	22	11	19
12	4	46	15	29	22	18	18
13	5	9	15	48	22	26	17
14	5	32	16	6	22	34	16
15	5	56	16	23	22	41	15
16	6	19	16	41	22	47	14
17	6	42	16	58	22	53	13
18	7	5	17	15	22	59	12
19	7	28	17	32	23	5	11
20	7	51	17	48	23	9	10
21	8	14	18	4	23	13	9
22	8	36	18	20	23	17	8
23	8	58	18	35	23	20	7
24	9	21	18	50	23	23	6
25	9	43	19	5	23	26	5
26	10	4	19	19	23	28	4
27	10	26	19	33	23	29	3
28	10	48	19	47	23	30	2
29	11	9	20	0	23	31	1
30	11	30	20	13	23	31	0
	♋	♌	♍	♎	♏	♐	

Of the Sun's Declination in Degrees and Minutes.

Which is a certain distance in degrees and minutes that the Sun declines, either North or South from the Equinoctial, passing through the 12 signs of the Zodiack; for when he passeth through γ , δ , Π , and toucheth \odot , his North Declination is greatest, which is 23 degrees 31 minutes, &c. and then he returns again through \odot , Ω , ϖ , and toucheth \ominus , where he hath no Declination, but passing through \ominus , \mathfrak{m} , \uparrow , and touching ϖ , where his greatest South Declination is, being also 23 degrees 31 minutes, and then he returns back from thence also through ϖ , \mathfrak{m} , \times , and touching γ again, where he hath likewise no Declination, but is upon the Equinoctial; and for to find out his Declination for any degree of the Ecliptick, this Table is here inserted, whose use is thus, Take notice of the sign and degree \odot is in, and if the sign be at the top, count the degrees downwards in the first Column, but if the sign be at the bottom,

F 2

then

then count the degrees upwards in the last Column, and in the common Angle where the sign and degrees meets, is the Suns Declination in degrees and minutes.

Example.

☉ being in 18 degrees of 8, find 18 in the first Column, and against it, under 8 is 17 degrees 15 minutes, ☉s Declination.

Of the Sur's Amplitude.

The Amplitude of the Sun, Moon, or any Star, is the distance in degrees and minutes of their rising and setting from the true East or West Points of the Compass upon the Horizon, and the Suns greatest Amplitude is about 40 degrees on either side of those Points, both in his rising and setting; (*viz.*) his rising is from within 5 degrees of the South-East Point to 5 degrees of the North-East Point, and his setting is from 5 degrees of the South-West Point to 5 degrees of the North-West Point; and I have here fixed a
small

Small Table that may serve to find it out for every two degrees of the Ecliptick, and is to be understood after the same manner, as the Table of the Suns Declination.

A Table of the Sun's Amplitude for every 2 Degrees of the Ecliptick.

Deb	♈	♉	♊	♋	♌	♍	♎
D.	M.	D.	M.	D.	M.	D.	M.
0	0	0	10	45	34	10	30
2	1	15	20	0	34	50	28
4	2	30	21	10	35	30	26
6	3	45	22	20	36	10	24
8	5	0	23	30	36	45	22
10	6	15	24	40	37	10	20
12	7	30	25	50	37	35	18
14	8	45	26	55	38	0	16
16	10	0	28	0	38	20	14
18	11	15	29	0	38	40	12
20	12	30	29	50	39	0	10
22	13	45	30	40	39	15	8
24	15	0	31	30	39	30	6
26	16	15	32	10	39	40	4
28	17	30	32	50	39	50	2
30	18	45	33	30	40	0	0
	♈	♉	♊	♋	♌	♍	♎

Example.

The Sun being in 12 deg. of ♈ , his Amplitude is required, find 12 in the first Column, and in the second Column against it under ♈ is 7 degrees 30 minutes for his South Amplitude, \odot being also in 16 degrees of ♏ , what is his Amplitude? Now ♏ is at the bottom of the Table, therefore count the degrees upwards in the last Column until 16 is found, then against it, over ♏ , is 26 degrees 55 minutes, which is \odot 's North Amplitude. Note, if he is in Northern signs, his Declination or Amplitude is North; but if he is in Southern signs, then it is South. So this Table may serve for common use, although in some odd Minutes are not exact.

Of the Sun's Meridian Altitude.

The Sun's Meridian Altitude, is his distance from the Horizon in degrees and minutes, when at any time he is on the Meridian, whose greatest Altitude is about 62 degrees, which is 28 degrees.

grees from the Zenith, and his least Altitude is not full 15 degrees, being near 75 degrees distance from the Zenith; so that there are 47 degrees between his highest and lowest place on the Meridian, which may easily be known by a Quadrant; but for lack of which, I have here also placed a Table, shewing the Sun's Meridian Altitude for every second degree in each Sign.

D. S.	♈	♉	♊	♋	♌	♍	♎
D. M.	A. M.	A. M.	D. M.	D. M.	D. M.	D. M.	D. M.
0	38 28	19 58	58 41	38 28	26 5	10 15	30
2	39 16	50 41	59 6	37 40	26 15	17 50	28
4	40 3	51 24	59 29	36 53	25 34	17 27	26
6	40 51	52 4	59 51	36 5	24 54	17 5	24
8	41 39	52 41	60 11	35 17	24 15	16 44	22
10	42 26	53 20	60 30	34 29	23 36	16 26	20
12	43 14	53 51	60 46	33 42	22 59	16 10	18
14	44 0	54 34	61 2	32 56	22 22	15 54	16
16	44 47	55 0	61 15	32 9	21 47	15 41	14
18	45 23	55 43	61 27	31 23	21 13	15 30	12
20	46 18	56 16	61 38	30 37	20 40	15 21	10
22	47 4	56 48	61 48	29 52	20 8	15 1	8
24	47 49	57 18	61 55	29 7	19 38	15 6	6
26	48 32	57 47	61 57	28 24	19 9	15 2	4
28	49 15	58 15	61 59	27 40	18 41	14 59	2
30	49 58	58 41	61 0	26 58	18 15	14 58	0
	♈	♉	♊	♋	♌	♍	♎

The Use of this Table is after the same manner as the former, therefore I shall not say much to describe it, but will quote an

Example.

The Sun being in 6 degrees of Π , (which is upon the 16th day of the 3d Month) I desire to know his Altitude when he is upon the Meridian, viz. just at Noon; I find 6 in the first Column of degrees, and against it under Π is 59 degrees 51 minutes, the Suns Altitude, and he being in 24 degrees of \mathcal{C} , hath again the same, as appears by \mathcal{C} being at bottom, and finding 24 in the last Column of degrees; and at any time to know his distance from the Zenith, do but subtract his Altitude out of 90, and the remainder is the same, as in this Example; take 59 degrees 51 minutes out of 90 degrees, there remains 30 degrees 9 minutes, being the distance.

The Description and Use of a small portable Instrument to find the Hour of the Day by the Sun-shining.

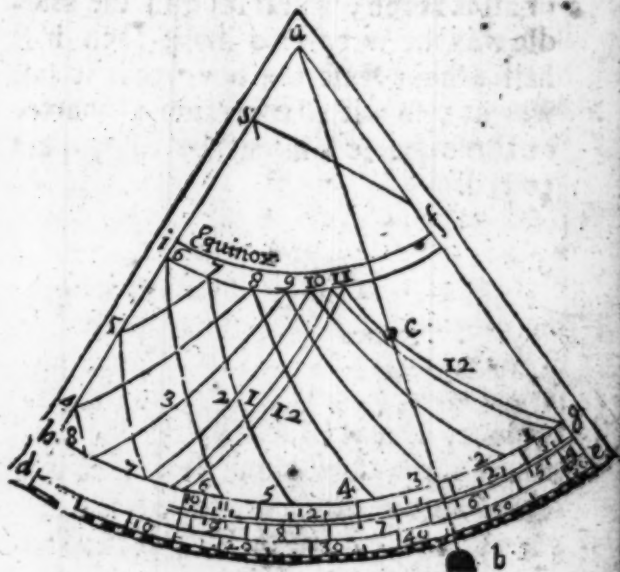
This Instrument may be made either of Wood, Brass, Silver, &c. or on Paper for a shift, pasted on a thin Board that will not warp, at the top of which at a, is to be fixed a piece of Silk with a small Plummer of Lead at the end, noted by B; and on this string there must be a Bead or Pins-head, to slip up and down, as at c. likewise upon the edge of the Instrument, noted with a d, there must be a small hole to put in a Pin, or short bit of Wire, about a quarter of an Inch long, signified by e. from which must be drawn a Line to f. and exactly square to the Line a d. and at the bottom, between d. and e. are divisions for the 12 Months, signified by the Figures, as 10, 11, 12, 1, 2, 3; uppermost, and under them back again is 4, 5, 6, 7, 8, 9, every Month is divided into 3 parts, signifying the 10th, 20th, and 30th day thereof; and as for those days between, Reason it self will direct;

rect; the Line from h. to g. represents the Tropicks, and the Line i. f. the Equinoctial, so the Hour-lines are between them drawn from the one to the other; those that go from the Equinox towards the Right Hand, are the Hour-lines from the Suns entring γ , until his entring ϵ , that is, all the time that the days are above 12 hours long, and those lines drawn the contrary way, cross the other, are to serve the other part of the Year, that is, when the days are under 12 hours. Note also, that every line serveth both for Morning and Afternoon, as for 5, 6, 7, 8, 9, 10, 11, in the Morning, serves for 7, 6, 5, 4, 3, 2, 1, in the Afternoon, as may be seen by the Figures placed at the ends of the lines; at the lower edge of the Instrument is the degrees, by which the heighth of the Sun may be known any hour.

Now having described the Instrument, I will shew its Use, which is easie and plain, in finding the hour of the day; for first, (the third being fixed at a.) lay it upon the day of the Month (as in this Instrument it is fitted to the 26th of the 1st Month, or 24th of the 6th)

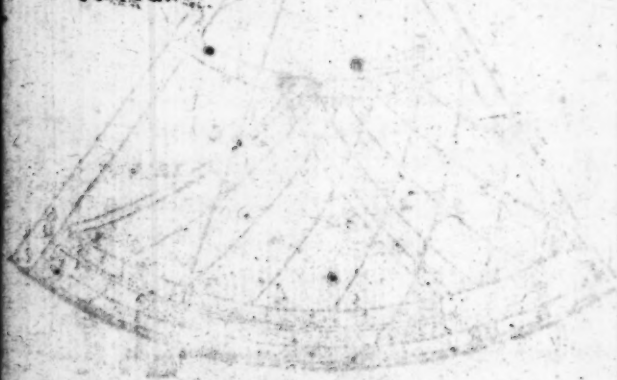
(95)

6th Month) so staying it there, slide the Bead or Pin s-head just upon the line of 12, as here is seen at c. then it is fitted for that time, to find the hour of the day, then take it up, and lay the



Thumb of thy Right Hand about g. and the Thumb of thy Left Hand below s. turning the Left side of thy Body to the Sun, and hold the Instrument until the Sun cast the shadow of the short piece of Wire

Wire at s. straight along that line to f. so that it be neither above nor below it, the Plummer at the same time having free liberty to play, then shall the Bead, falling upon the Hour-line give the true hour of the day, either before or after Noon; and if it be in the middle way between two lines, then it is half a hour past the hour that it last was at; so with Discretion a quarter or three quarters might be easily perceived.



A

A Table shewing the Hour of the Day
by a Plain Staff divided into 10 Equal
Parts.

Hou. bef. Noon		11	10	9	8	7	6	5
Hou. aft. Noon	12	1	2	3	4	5	6	7
4	11	11	5b	6	7b	9c	13b	19a
3	10	10	5b	6	7b	10	13c	19b
2	9	9	5c	6b	7c	10a	14	20a
1	8	8	6a	6c	8a	10c	14c	21b
	7	7	7	7b	9	11b	16	23
	6	6	7c	8a	10	12c	17b	26b
	5	5	8c	9a	11	14	19b	30
	4	4	10	10b	12a	15c	22a	36b
	3	3	11a	12	14	18	26	46
	2	2	13	13c	16	21c	31a	62c
	1	1	15	16	18c	24c	36	97
			17b	18b	22	29	51	210
			20b	21c	26	36	70c	
			24	25b	31	46	110	
			28	29c	37	59	208	
			32	34b	44	76	829	
			36	39	51	97		
			39	42	56b	117		
			40	43c	59	126		

Note that
a stands for
one quarter of
a part, b. for
half a part, and c.
for three quarters.

The Use of the Table

Take a straight Staff of any length,
and divide it into 10 equal parts, mark-
ing them thereon, then in some plain
level place, where the Sun shines, set
it.

it upright, and mark where the end of the shadow falls, which done, measure with the Staff the length of the shadow, and note how many parts it contains, which find out in this Table against the day of the Month, and over head is the hour of the day ; and if the day of the Month be not there, then reckon by proportion the number of parts suitable to the day.

As for Example.

The hour of the day required the 5th of the 1st Month, or 17th of the 7th Month, (the observation being all one) the shadow being 35 parts, (*viz.*) 3 Staves length and a half, that number suitable to the day proposed falls between 31 a. and 39, where there is 8 and 4 at top ; so if it was Morning it was 8, if Afternoon 4, for the time of that observation, and so proportionably for any day or part of an hour. Note also, the 12 Months are inserted in the 2 first Columns with their proper figures, being about 3 days in each Month there set down.

*The Description and Use of the Nocturnal
at the beginning of the Book, to find the
Hour of the Night.*

In the midst thereof in \circ is the Center, or North-pole, and the Star next to it is called the Pole-star, and round about the same is placed the most principal Stars for observation, to about 40 degrees from the Pole, and in that order that they are placed in the Firmament, and the innermost Circles is divided into 12 parts, for the 12 Months of the Year, signified by the figures in each division; and every Month is also divided into 6 parts for every 5th day; the outermost Circles is divided into 24 equal parts for the 24 hours, and in the white Circle between these two it must be finely cut out, which being done, paste a strong piece of Paper to the backside of the Leaf, then fix the Center of the Nocturnal to the same, with a thread, or such like, that it may move equally round, and then it is fit for Use.

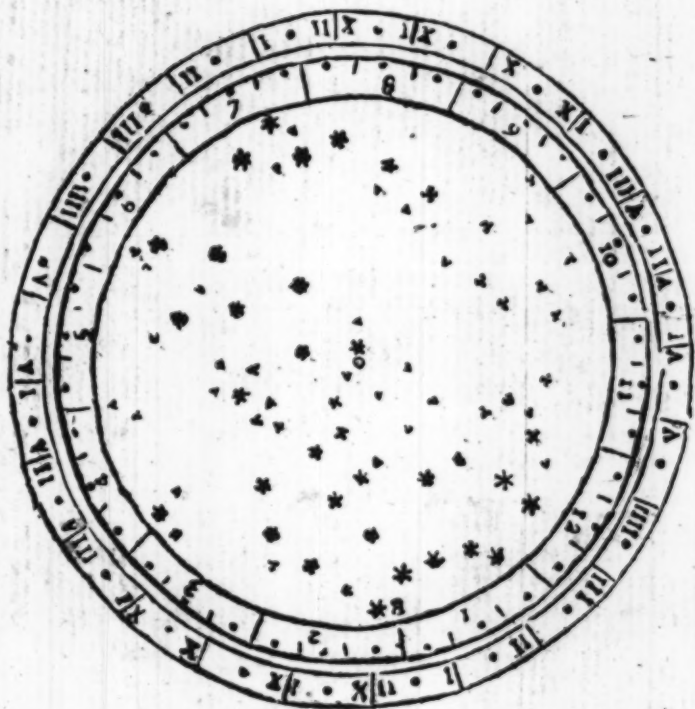
Its Use.

Any time of the Year, or Night, when the Stars are easie to be seen, find the Star upon the Nocturnal which thou seest upon the Meridian in the Heavens, (that is, exactly under the Pole) then turn the Rundle about till the said Star lies just upon the Meridian Line of XII. in the under part of hours, then against the day of the Month, in the Month-circle, is the Hour of the Night in the Hour-circle.

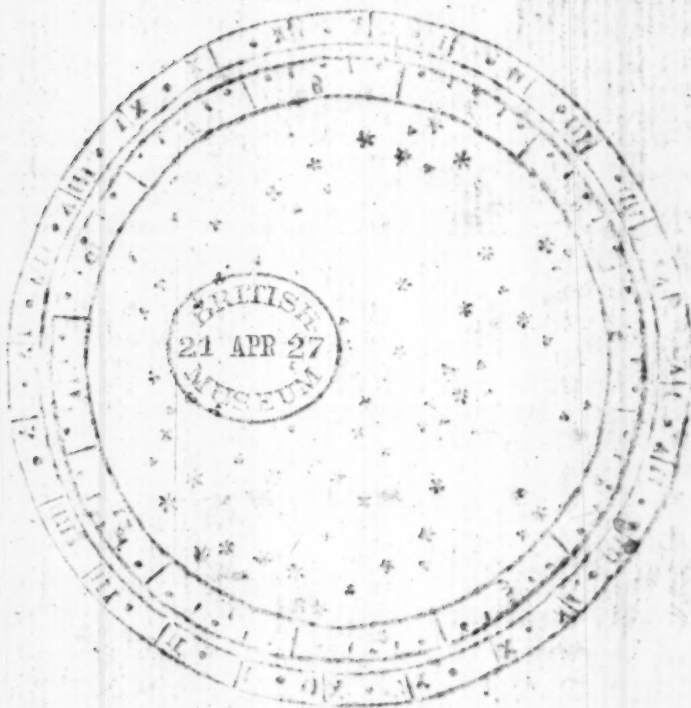
Example.

Upon the 15th of the 9th Month, suppose I find the Star in the tip of the *Great Bears Tail* upon the Meridian in the Heavens, (which is one of those Stars belonging to *Charles's Wain*) as at a I turn the Rundle about until the said Star lyes just over the Line of XII. in the Hour-circle, then in the Month-circle find the time aforesaid, and in the Hour-circle, against the same is one quarter past 9 for the hour of the Night.

A Nocturnal to find the Hour of the Night ; the
Description and Use thereof is in page 99, 100.



A Memorial to her Majesty the Queen of the Night; the
Description and the effect is in page 29, 100.



De. La.	Hon.	Min.	De. La.	Hon.	Min.	De. La.	Hon.	Min.
1	12	3	31	14	1	61	18	53
2	12	6	32	14	6	62	19	19
3	12	10	33	14	11	63	19	49
4	12	14	34	14	16	64	20	24
5	12	17	35	14	22	65	21	10
6	12	20	36	14	27	66	22	20
7	12	24	37	14	33		day	ho
8	12	28	38	14	38	67	24	1
9	12	32	39	14	44	68	42	1
10	12	35	40	14	51	69	54	16
11	12	39	41	14	58	70	64	13
12	12	43	42	15	4	71	74	0
13	12	46	43	15	11	72	82	6
14	12	50	44	15	18	73	89	4
15	12	53	45	15	26	74	96	17
16	12	57	46	15	34	75	104	1
17	13	1	47	15	42	76	110	7
18	13	4	48	15	51	77	116	14
19	13	8	49	16	0	78	122	17
20	13	12	50	16	10	79	127	9
21	13	16	51	16	20	80	134	4
22	13	20	52	16	30	81	139	13
23	13	25	53	16	42	82	145	6
24	13	29	54	16	54	83	151	2
25	13	33	55	17	8	84	156	3
26	13	38	56	17	22	85	161	5
27	13	42	57	17	36	86	166	11
28	13	46	58	17	52	87	171	21
29	13	51	59	18	10	88	176	5
30	13	56	60	18	30	89	181	21
						90	186	6

The Use of the Table.

This Table is divided into 3 parts; as the double lines and titles at top shew, each one containing 30 degrees of Latitude, beginning at one and proceeding to 90, so find out the Latitude of any City, Town, or Country, by any true Map, the same find under degree of Latitude in this Table, and against it is hours and minutes of the longest day in that place, which number subtract from 24, shews the length of the shortest Night.

Example.

York having about 54 degrees of Latitude, which find in the middle part of the Table, and against it is 16 hours 54 minutes for the longest day there. At 66½ degrees the Sun comes to appear several days above the Horizon, and may be counted by days and hours, &c.

A Table of the Eclipses of the Sun and Moon, with the Year, Month, Day and Hour, that they may probably happen on, from 1694, to 1702.

Anno. ☉ or ☾	Mon.	Days	Hou.	Signs	Deg.	Visible or In- visible.
1694	☉	4 12	5	♏	1	Visible
	☉	10 6	5	♏	25	Invisible.
	☾	11 1	0	♏	22	Invisible.
	☾	4 26	12	♏	14	Visible.
1695	☉	4 1	5	♏	21	Visible.
	☉	9 25	19	♏	15	Invisible.
	☾	3 17	22	♏	7	Invisible.
	☾	9 10	8	♏	28	Visible.
1696	☾	2 6	12	♏	27	Visible.
	☾	8 29	16	♏	18	Visible.
1697	☉	3 10	13	♏	1	Invisible.
	☉	9 25	20	♏	16	Invisible.
	☉	8 19	8	♏	7	Visible.
1698	☉	1 31	7	♏	21	Invisible.
	☉	7 23	16	♏	11	Invisible.
1699	☉	1 20	20	♏	11	Visible small.
	☉	7 12	13	♏	1	Visible great.
	☾	1 7	18	♏	26	Visible.
	☾	6 30	0	♏	17	Invisible.
1700	☾	12 22	18	♏	15	Visible.
	☾	6 18	12	♏	6	Invisible.
1701	☉	11 27	13	♏	19	Invisible.
	☉	5 23	21	♏	12	Visible.
	☾	12 11	10	♏	4	Visible.
	☾	6 7	2	♏	25	Invisible.

If the Δ at her true δ to \odot be less than 10 degrees from \odot or δ she must be Eclipsed.

If the apparent Latitude of the Δ at the time of the true δ with \odot be less than 30 minutes, he must be Eclipsed.

Now as to that Great Eclipse of the Sun, that lasted from the 6th to the 9th hour, that we read of, *Luke 23.* when Christ suffered on the Cross, was not natural; as other Eclipses are; that is, it was not caused by the interposition of the Moon between the Sun and the Earth, for the Moon being then about the full, or 180 degrees distant from the Sun, and under the Earth, as to the Situation of *Jerusalem*, therefore it was Miraculous, and contrary to Nature, and only by the Omnipotent Power of God, that caused the Sun to withhold his Light for that time, and this being accompanied with an Earthquake, that History relates there were an infinite number of Houses fell to the Ground, insomuch that the Nations about were surprized, not knowing the cause; for it is said, that

Dionysius

Dionisius the *Areopagite*, being a Man Skilled in the Course of the Stars, and at that instant at *Athens*, seeing what happened, spake with a loud Voice, saying, *Either the World would end, or the God of Nature suffer*, and the Sages being Astonished hercat, caused an Altar immediately to be Built to the *Unknown God*: And about 17 Years after, *Paul* came to *Athens*, (being about 720 Miles from *Jerusalem*, and in *Greece*) and seeing the place given to Idolatry, and the Altar with this Inscription, began to preach unto them the Living God, and his Son *Jesus Christ*, and many Believed, amongst whom was this *Dionisius*, Acts 17. 34.

Of some Things that appear to Mans Understanding, demonstrated from the Eclipses of the Sun and Moon.

Seeing the Sun is Eclipsed only in his 6 with the Moon, and the Moon in her 8 to the Sun, it is concluded that the cause of the Suns Eclipse is the interposition of the ☾ betwixt him and the Earth ; and the cause of the Moons Eclipse,

Eclipse, the interposition of the Earth betwixt her Body and the Sun.

Thus the Solar Eclipses do shew the ☽ to be lower and lesser than the Sun, and the Lunar do evince the Earth not founded infinitely below us, but that the Heavens (under us) are distant from the Earth as far upwards (in respect to our Antipodes) as here they are, and consequently that the Earth is not square, nor long, nor flat, but on every side perfectly round, (like unto a Globe or Ball) for the shadow of the Earth (on the Moons Body) is always, and on every part observed to be round, and that the vastness of the Mountains and Valleys, that some have related there are in Forreign Parts, is so inconsiderable, in respect of the largeness thereof, that nothing of it is perceived in the shadow.

By Lunar Eclipses is also known that the Earth is moved (or placed) in the middle of the Zodiack, because that she is Eclipsed only in the opposite places thereof.

Lunar Eclipses best discover unto us the Longitude of Places upon the Earth, and that the Earth and Water are one Globe.

Lunar

Lunar Eclipses demonstrate the shadow of the Earth to be Conical, that is, ending in a sharp point; and in the same places of the Moons Transits, or Movings, to be sometimes thicker, otherwhiles to be more slender, notwithstanding a certain Rule is had to the Suns motions.

Hence we may gather, that the Sun is far greater than the Earth, and the Moon lesser, so the Solar Eclipses demonstrate the Sun and Moons distance from the Earth to be different.

Hereby also a Rule is (supposed to be) found out for finding the distances of the Sun and Moon from the Earth, and the Magnitudes of their Bodies.

A Necessary Table, whereby the Day of the Month may be readily found out at any time, knowing the Dominical Letter.

Months.	Days of the week.						
VIII. XI.	a	b	c	d	e	f	g
IX. XII.	d	e	f	g	a	b	c
V. II.	g	a	b	c	d	e	f
III.	b	c	d	e	f	g	a
IV.	e	f	g	a	b	c	d
VI.	c	d	e	f	g	a	b
VII. X.	f	g	a	b	c	d	e
Days of the Month.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				

The Use of the Table.

Having found the Dominical Letter for any time assigned, by the former Directions, then find out the Month, (*viz.*) the number thereof, (under Months) on the Left Hand, and

and straight from thence toward the Right Hand are the Letters for the Days of the Week, (one of which is always Dominical Letter) and in the lower part are the Days of the Month answering thereto, observing when that row of Letters is once passed over against the Month, the uppermost row of Figures for the Days of the Month must be counted therewith; so the second time of passing the Letters must answer the second row of Figures, &c. unto the Months end.

Example.

Upon the 2d 4th day of the Week in the 5th Month 1695. I desire to know what Day of the Month it is, f. is Dominical Letter, and against V. f. is the last Letter in the row, and 7 under it, shews that the first first Day of the Week, is the 7th day of the Month, then begin again at g. for 2d day, a. for 3d day, b. for 4th day, under it in the 2d row of Figures is 10 for the day of the Month desired.

A Table of the Four Terms, and their Returns.

Th: Term called	Hill Term	<i>Jan.</i>	
		be. 23. 11. Mo.	Octab. Hill. 20. 11. Mo.
		hath 4 returns	Quind. Hill. 27. 11. Mo.
		en. 12. 12. Mo.	Crast. Pur. 3. 12. Mo.
	Easter Term	<i>Feb.</i>	
		be. 17 d. af. Ea.	Octab. Pur. 9. 12. Mo.
		hath 3 returns	Quind. Pascha.
		en. 6 d. be. Pen.	Tres Pascha.
	Trin. Ter.	<i>Mar.</i>	
		be. 5 d. af. Trin.	Mense Pascha.
		hath 4 returns	Quinq. Pascha.
		ends in 19 da.	Crastina Ascen.
	Michael. Term	<i>Apr.</i>	
		beg. 24. 8. Mo.	Crastino Trin.
		hath 6 returns	Octabis Trin.
		end. 28. 9. Mo.	Quindeno Trin.
		<i>May.</i>	
		beg. 24. 8. Mo.	Tres Trin.
		hath 6 returns	Tres Mich. 20. 8. Mo.
		end. 28. 9. Mo.	Mens. Mich. 27. 8. Mo.
		<i>Jun.</i>	
		beg. 24. 8. Mo.	Crast. Anim. 3. 9. Mo.
		hath 6 returns	Crast. Mart. 12. 1. Mo.
		end. 28. 9. Mo.	Octab. Mart. 18. 9. Mo.
		<i>Jul.</i>	
		beg. 24. 8. Mo.	Quind. Mart. 25. 9. Mo.
		hath 6 returns	
		end. 28. 9. Mo.	

This Table is so easie to be understood, that it needs no Explanation, but only some Latine words, which some perhaps may not know their signification; yet they are commonly used

used in the like Case, at the Returns of the Terms, as *Octabis Hillarii* is 8 days after *Hillary*, *Quindeno Hillarii* is 15 days after, *Crastino Purifica.* is the morrow after the *Purificat.* *Tres Pascha* is 3 Weeks after *Easter*, *Mense Pascha* is a Month after, *Quinq; Pascha* is 5 Weeks after; so every Return hath a Basis, or Noted Day from which it is named; as here *Hillary* is the Basis for the two first Returns in that Term, *Pascha*, or *Easter-day*, is the Basis for the four first Returns bearing that Name; *Martin* is the Basis of the three last Returns in *Michaelmas* Term, &c. Many other things belongs thereto, of which I shall forbear to speak, being little used to Law-matters.

Of Years, Months, Days, &c.

Now forasmuch as the Sun is the Natural Cause of Years, Months, Days, &c. I think it a convenient place to say something briefly of the diversity thereof; Collected chiefly out of the Works of *G. Wharion*.

Of Years.

A Year is the principal part of time, by which, not only the Ages of Men, and of other things, but also the times of many Actions in the World, (*viz.*) their Beginnings, Progress, Continuance, and Intervals, are Measured. It is a Periodical Revolution of a great Circle of Months and Days, in which the four Seasons, Spring, Summer, Autumn, and Winter, are, after one Revolution of the Sun, ordained to return in their Courses.

But there are divers sorts of Years, according to divers Nations, somewhat different from each other, reduced to the Rule of the Celestial Motions, and are divided into Astronomical and Political.

The Astronomical Year is Two-fold, that is, Solar and Lunar.

The Solar Year, is the time in which the Sun, by his proper motion departing from one point of the Ecliptick, returns to the same again, and this is called either Natural or Syderial.

1. The Natural or Tropical Year, is the space of time, in which the Sun departing from one of the Tropical, Equinoctial, or Solstitial Points, and running through the Ecliptick, returneth to the same again.

This Natural or Tropical Year is also Twofold, (*viz.*) Mean, or Equal and True (called also unequal).

The Mean, or Equal Tropical Year, contains 365 days, 5 hours, 49 minutes, 15 seconds.

The true or unequal Tropical Year, is sometimes more, and sometimes less than the Equal, by 6 or 7 minutes; so it increaseth or decreaseth according to the swift or slow progress of the Equinoctial or Solstitial Points.

2. The Siderial Year, is the space of time in which the Sun returns to the same Star from whence he departed, and is 365 days, 6 hours, 9 minutes, but in seconds Authors differ.

Now the Lunar Year is likewise Twofold, the Common, which is 12 Moons, or 354 days, 8 hours, &c. the Embolismal, which is 13 Moons, or Lunations, containing 383 days, 21 hours, &c.

The Political or Civil Years, be such as be commonly used for the distinction of Times, wherein respect is had either to the motion of the Sun or Moon only; or to them both together, according to the Customs of divers Nations; some of them I shall mention.

The *Egyptians* have regard to the Sun, whose Year is 365 days exactly; for every Month hath 30 days, and at the end they add 5 Intercalar days: And such Years the Antient *Hebrews* observed, yet so, as they Intercalated one whole Month of 30 days in every 120 Years.

The *Persians* also used the like Years (but without the Intercalated Month) formerly, but finding it too small, by the Authority of *Alb.* and their Emperor, it was made now like to the *Gregorian* Year, and begins the first day of their first Month *Pharavardin*; but now it is Corrected, beginning from the Vernal Equinox.

The *Julian* or Old *Roman* Year, is greater than the *Egyptians*, and Antient *Persians*, (something of which is said before in pag. 24.) consisting of 365 days

days 6 hours, it is in use by the *English*, *Muscovites*, *Syrians*, *Abassines*, *Ethiopi-ans*, although the Names of their Months differ, it is held to begin (with the *Vulgar in England*.) on the first day of the Eleventh Month; but according to the Church of *England* it beginneth on the 25th day of the first Month called *March*; and the Astronomers begin the Year at the Suns entering ~~the~~ being the Winter Solstice; but yet are wont by Custom to begin the Tropical Year at the Vernal Ingress, and the Syderial Year from the first Star of the Rams-horn, esteeming it as chief of all others.

The *Gregorian* or New *Roman* Year, mended by Pope *Gregory XII.* consists of 365 days 5 hours 49 minutes 12 seconds; so it is about 4 seconds less than the Mean, Equal, Tropical, Solar Year, which begins the 22^d of our tenth Month called *December*, (look more of it in page 25.) it being the Year received in all Countries (it is said) professing Subjection to the See of *Rome*.

The *Arabians*, *Indians*, and *Turks*, account by the ☉, who make up their Year of Twelve Synodical Lunations; and

in 30 Years, wherein their Period is compleated, they account 19 Years of 354 Days, and 11 (*viz.* the 2, 5, 8, 10, 13, 16, 19, 21, 24, 27, and 30,) of 355 days, so that by this account in their whole Period is 10631 days, and therefore one Lunation (whereof there are 360 in the whole 30 Years Period) containeth 29 days 12 hours 44 minutes.

The *Muscovites* and *Russians*, begin their Year from the first of the seventh Month called *Septemler* of the *Julian* Year, little differing in the Names of the Months and Feasts from the *Julian* Account.

The *Venetians*, 'tis said, begin their Year from the first day of the first Month, called *March*.

The *Syrians*, or *Syro-Gracians*, begin their Year from the first day of the eighth Month, called *October*, of the *Julian* Year, unto which they apply their first Month *Tisrin-Prior*.

The *Ethiopians* and *Alexandrians*, 'tis said, begin upon the 29th of the sixth Month *August*, of the Old Year, and so begin before the Autumnaal Equinox.

The

2. The Synodical, (or Month of Consecution, so called) is the space of time from one δ to another, being performed according to the Moons mean motion in 29 days, 12 hours, 44 minutes, and about 4 seconds; but according to her true motion, it is sometimes greater, or lesser, by about 12 hours.

3. The Month of Illumination, or Apparition, is said to be 28 days, or 4 weeks, it being the longest time that the Moon is to be seen between Change and Change, as it is reckoned.

Lastly, The Political Months, are Civil and Usual, as every Nation best pleaseth, which not only differ in proportion, but in names also, according to the Variety of Nations and People. As for Example.

Egyptian Months.

1. Thoth.	7. Phamenech.
2. Phaophi.	8. Pharmuthi.
3. Athyr.	9. Pa: hon.
4. Chæac.	10. Payni.
5. Tybi.	11. Epephi.
6. Mechir.	12. Mesori.

All consisting of 30 days each, and to the end of the last Month *Mesori* is added 5 days more, making their Year to consist of 365.

Persian Months.

- | | |
|--------------------------|-----------------------|
| 1. <i>Pharavardin.</i> | 7. <i>Mebar.</i> |
| 2. <i>Adar-pahascht.</i> | 8. <i>Aban.</i> |
| 3. <i>Chardad.</i> | 9. <i>Adar.</i> |
| 4. <i>Thir.</i> | 10. <i>Di.</i> |
| 5. <i>Mardad.</i> | 11. <i>Behemen.</i> |
| 6. <i>Scheheriz.</i> | 12. <i>Asphander.</i> |

All likewise consist of 30 days, to which is added in the Common Year 5 days, and 6 in the Bissextile.

Roman Months.

- | | |
|---------------------|------------------------|
| 1. <i>Martius.</i> | 7. <i>Septembris.</i> |
| 2. <i>Aprilis.</i> | 8. <i>Octobris.</i> |
| 3. <i>Maius.</i> | 9. <i>Novembris.</i> |
| 4. <i>Junius.</i> | 10. <i>Decembris.</i> |
| 5. <i>Julius.</i> | 11. <i>Januarius.</i> |
| 6. <i>Augustus.</i> | 12. <i>Februarius.</i> |

These

The *Atticks*, or *Athenians*, from the Summer Solstice, or the New Moon next to it.

The *Jews*, or *Hebrews*, have a double beginning of the Year, first Ecclesiastical, or according to *Moses* Law, which was upon the next New Moon to the Vernal Equinox. Secondly Civil, which begins from the Autumnal New Moon next to the Equinox. Therefore, 'tis said, in Politick Affairs the *Jewish* Year is deduced from the Month *Tisri*, but in Church Affairs from the Month *Abib*, or *Nisan*; yet the *Jews* of late Days, about the time of *Constantine* the Great, framed a peculiar Calendar by the Industry of *Rabbi Hillel*, wherein they brought the Moons motion, (which defineth the Feasts) to agree exactly enough with the Suns, so that the Equinoxes and Solstices could not easily be removed from their places.

Of Months.

THE Months by which we measure the Year are also Twofold, viz. Astro-

nomical and Political, and each hath several Divisions.

Astronomical or Natural, are according to the motion of the Sun and Moon, and be either Solar, or Lunar; the Solar are the spaces of time in which the Sun runs through a 12th part of the Zodiack, of which there are two sorts, mean, or equal, true, or unequal.

An equal Solar Month, is the time which the Sun by his mean motion goeth a 12th part of the Zodiack, and is always 30 days, 10 hours, 29 minutes, 6 seconds, &c.

But the true (or apparent) is according to the true motion of the Sun thro' the Zodiack, for when he is in or near his Apogee, the Months are longer; but when he is in or near his Perigee, they are shorter.

Lunar Months are referred to the Moons motion, and are chiefly Three-fold, (*viz.*)

1. The Periodical, or Month of Paragratiō, is the space of time in which the Moon by her mean motion goeth thro' the Zodiack, and is about 27 days, 8 hours.

2. The

their Months from the 29th of the *Julian August*.

Ethiopian Months.

1. <i>Mascaram.</i>	7. <i>Magabish.</i>
2. <i>Tiknich.</i>	8. <i>Miazia.</i>
3. <i>Hadar.</i>	9. <i>Ginboth.</i>
4. <i>Tachschas.</i>	10. <i>Sene.</i>
5. <i>Thir.</i>	11. <i>Hamle.</i>
6. <i>Facharish.</i>	12. <i>Nabase.</i>

• The days of these are the same as the former; the Names differ.

Arabian and Turkish Months.

1. <i>Muhurram.</i>	30	7. <i>Regab.</i>	30
2. <i>Sephar.</i>	29	8. <i>Sahaben.</i>	29
3. <i>Rabie I.</i>	30	9. <i>Ramadhan.</i>	30
4. <i>Rabie II.</i>	29	10. <i>Schevall.</i>	29
5. <i>Giumadi I.</i>	30	11. <i>Dhilkahda.</i>	30
6. <i>Ginmadi II.</i>	29	12. <i>Dhilkaga.</i>	29

In the last Month is 30 days, in their Leap-year.

Attick, or Athenian-Greek Months.

- | | |
|------------------|------------------|
| 1. Hecatombeon. | 7. Posideon. |
| 2. Metagisnion. | 8. Gamelion. |
| 3. Boedromion. | 9. Elaphebolion. |
| 4. Memeaterion. | 10. Munichion. |
| 5. Phianephon. | 11. Targelon. |
| 6. Anthesterion. | 12. Scirophon. |

At the end of which, sometimes the second, sometimes the third Year is joined a Leap-month of 30 days, to make it in some sort agree with the Suns motion, for their Months are Lunar, like the former.

Old Saxon Months.

- | | |
|-----------------------|------------------------------|
| 1. Lenet-monat. | 7. Gerst-monat. |
| 2. Oster-monat. | 8. Wynn-monat. |
| 3. Trimilki. | 9. Wint-monat. |
| 4. Weyd-monat. | 10. Winter, or Heligh-monat. |
| 5. Hen, or Hey-monat. | 11. Wolf-monat. |
| 6. Arn-monat. | 12. Sprout-kelt. |

These

These consist some of 30 days, some of 31, as is to be seen in the Calendar, also the original of these Names that are now used in the greater part of Europe, is there inserted, according to the relation of Ancient History.

Syrian, or Syro-Caldean Months:

1. <i>Tisrin Prior.</i>	31	7. <i>Nisan.</i>	30
2. <i>Tisrin Posterior.</i>	30	8. <i>Jiar.</i>	31
3. <i>Canun Prior.</i>	31	9. <i>Huziran.</i>	30
4. <i>Canun Poster.</i>	31	10. <i>Tamm.</i>	31
5. <i>Sabat, or Asbat.</i>	28	11. <i>Ab.</i>	31
6. <i>Adar.</i>	31	12. <i>Elnl.</i>	30

These Months agree with the European Months, according to the number of days; also in Leap-year they have 29 days in *Sabat*, but their beginnings differ, for their first Month agrees to the 10th of the Romans *October*, the 2d to the 11th of their *November*.

Syro-Græcian Months.

1. <i>Hyperboreus</i> .	31	7. <i>Xanthicus</i> .	30
2. <i>Dius</i> .	30	8. <i>Artemisius</i> .	31
3. <i>Appellæus</i> .	31	9. <i>Daſius</i> .	30
4. <i>Andinæus</i> .	31	10. <i>Panemus</i> .	31
5. <i>Peritius</i> .	28	11. <i>Lous</i> .	31
6. <i>Diſtrus</i> .	31	12. <i>Gorpæus</i> .	30

The days of these Months are the same as the former, and Leap-year also; but differ in their Names.

Abassine and Copti Months.

1. <i>Tuth</i> .	7. <i>Pharmahath</i> .
2. <i>Papa</i> .	8. <i>Parmuda</i> .
3. <i>Hathur</i> .	9. <i>Paschnes</i> .
4. <i>Chiak</i> .	10. <i>Peuna</i> .
5. <i>Tuba</i> .	11. <i>Epip</i> .
6. <i>Amschir</i> .	12. <i>Musre</i> .

These have each of them 30 days, but unto the Month *Musre*, they added 5 days in the Commune Year, and 6 in the Bissextile, deducing most part of their

These *Saxons* came into *England* about the Year of our Lord 447, and Inhabited the Land, they being our Ancestors, (as 'tis thought) and I suppose these Months were Lunar, that they observed, because they had great respect unto the Moon in their Affairs; and they used short square sticks to Engrave thereon the whole Courses of the Moon, for a Year, whereby they could tell her Aspects with the Sun, also their Festivals, thus they called an *Al-mon-ange*, viz. *Al-mon-bead*, from hence is derived the Name of *Almanack*. They did count their time by Nights, as *Seannight*, for Seven-nights, or one Week, and *Fortnight*, for Fourteen-nights, or two Weeks, which words are still used. *Verstegan Antiq. Cap. 3.*

Hebrews, or Jews Months.

1. <i>Abib</i> , or <i>Nisan</i> .	30	6. <i>Elni</i> ,	29
2. <i>Jiar</i> , or <i>Zif</i> .	29	7. <i>Ethanim</i> , or	
3. <i>Sivan</i> .	30	<i>Tisri</i> .	30
4. <i>Tamuz</i> .	29	8. <i>Marehsuan</i> , or	
5. <i>Ab</i> .	30	<i>Bull</i> .	29
		9. <i>Cisleu</i> .	30
		10. <i>Tebeth</i> .	

10. Tebeth.	29	12. Ader.	29
11. Sebat.	30		

The Names of these Months are mentioned in the Scripture, as appears in *Esf.* 9. 1. 17. *Exod.* 13. 4. *Esf.* 3. 7. 1 *Kin.* 6. 1. *Esf.* 8. 9. *Neh.* 6. 15. 1 *Kin.* 8. 2. and 6. 38. *Zach.* 7. 1. *Esf.* 2. 16. *Zach.* 1. 7.

And this number of days is attributed to every Month in the Commune Year, which in all is 354 days, but their Embolism Year exceeds the Commune Year one whole Month of 30 days, and then is *Ader* inserted before their last Month; but then their last Month is called *Veader*: Now to find out what time of their Months agree with ours, it is to be understood that they began their Months at the New Moons, and then they were to blow the Trumpets with Joy, *Numb.* 10. 10. And their first Month began at the first New Moon, that happened after the Sun entered γ , (as is before-said) so it appears that their first Month is part of our first and second, (for the most part) and their second, part of our second and third, and so proceeds through-

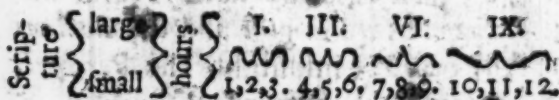
throughout the Year in like order, for finding the *De Changes*, their Months about then begin.

Of Days and Hours,

Days are called either Natural or Artificial; a Day Natural is one entire Revolution of the Sun, or Equinoctial about the Earth, which is performed in 24 hours, containing both day and night; now this day hath several beginnings, as we *English* and the *Romans* usually begin at midnight, the *Persians*, *Bohemians* and *Babylonians*, begin at Sun-rising; the *Jews*, *Egyptians*, *Athenians*, *Umbrians*, &c. begin at Sun-set, (which doth appear to be the true beginning by the Scriptures, where the Night is put first, as *Gen. 1. 5, 8, 13, 19, &c. Lev. 23. 32. 2 Cor. 11. 25.*) the Astronomers begin at mid-day or noon.

An Artificial day, is from Sun-rising to Sun-setting, and differs in length of equal hours, according to the Sun's place in the Zodiac, and Latitude of the Region, but in unequal hours (called Planetary hours) there is always

12, so that one hour is the 12th part of a day, be it long or short, and these hours we read of in Scripture, *John* 11. 9. *Mat.* 20. for at or about Jerusalem, where great part of it was writ; the Latitude is about 33 degrees, which gives above 14 equal hours for the longest Artificial day, therefore we may easily perceive that it was meant the unequal hours. Their day also was divided into 4 equal parts, or large hours.



And with us they are 7, 8, 9, 10, 11, 12. 1, 2, 3, 4, 5, 6. so their 3d hour was the midst of the Forenoon, and 6th hour full Noon, and 9th hour mid Afternoon, and 12th hour Sun-set, *Mar.* 15. 25, 34. *Luke* 23. 44. *Acts* 2. 15, and 10. 3, 30.

Of Night-watches.

They divided the Night also into 4 equal parts, called Watches, allowing 3 hours to every Watch, which makes the

the Night likewise to consist of 12 hours, *Mar. 13. 35.*

The first Watch began at Evening, and was till their third hour, (or our ninth) at Night.

The second, or middle Watch, was from thence to Midnight, *Judge 7. 19. Luke 12. 38.*

The third Watch, or Cock-crowing, was from Midnight till their ninth hour (or our third hour) in the Morning, *Luke 12. 38.*

The fourth Watch, was from that time until Morning, or Sun-rising, *Mar. 6. 48. Mat. 14. 25.*

A Brief Touch of the Judgment of Authors concerning the Natural Cause of Watry Meteors, as Snow, Hail, Rain, &c.

Note that all Watry Meteors, as Snow, and such like, is but a moist Vapour drawn up by the Vertue of the Sun, and the rest of the Planets, into the middle Region of the Air, where being Dissolved, or Congealed, it falleth upon the Earth as Rain, or Hail.

Of

Of the Rainbow.

It is said the Rainbow is caused by the Sun-beams striking upon a hollow Cloud, when its edge is repelled, and driven back against the Sun, and thus ariseth variety of Colours, by the mixture of Clouds, Air, and fiery Light together, therefore it is seen in opposition to the Sun, for the most part on an Evening it was ordained as a sign of the Covenant that the Lord made with Noah, Gen. 9. 13.

Of Rain.

Rain is a cold Vapour, and earthly Humour, raised from the Earth and Waters, into the middle Region of the Air, where by the extremity of cold it is thickned into the Body of a Cloud, and after being dissolved, falleth upon the Earth, Amos 5. 8. and 4. 7. Job 26. 8. and 36. 27.

Of Hail.

Hail is engendred of Rain, congel-
ed

ed into Ice, freezing the drops presently after the dissolving of the Cloud, and the higher it cometh, and longer it tarryeth in the Air, the lesser and rounder it is; we have sometimes great showers of Hail in the heat of Summer, after a Thunder-clap, which doth manifest, that the Air at that time is extream cold; thus to congeal the Water therein, notwithstanding the heat upon the Earth at that instant, Job 38. 22, 23.

Of Snow.

Snow is of the same Humour that Hail is, but not grown together so hard, but is of looser parts, therefore in Summer is melted into Rain before it cometh to the Earth, Job 37. 6.

Of Frost and Dew.

In the day time, through the heat of the Sun, there is a cold moist Vapour drawn up a little from the Earth, and at Night it descendeth again upon the Earth, and is called Dew; but if by means of Cold it be Congealed, it is called Frost, therefore in hot Seasons,
and

and windy Weather, Dews are not so frequent, nor much, but after a calm and clear Night: For when Frosts happen, they dry up wet and moisture, the Ice being melted, the like quantity in Water proportionably is less, Job 38. 28, 29.

Of Wind.

Wind is said to be an Exhalation hot and dry, engendred in the Bowels of the Earth, and being gotten out, is carried sidelong upon the face of the Earth, and cannot mount upwards above the middle Region of the Air, which by reason of its Cold doth beat back, so as by such strife, and by meeting other Exhalations rising, his motion is forced to be rather round than right in its falling, thereby is made a Whirl-puff, which sometimes by its violence, carrieth many things with it from place to place, &c.

Of Earthquakes.

The material Cause is said to be plenty of Vapours, or Winds gotten and
con-

confined within the Bowels of the Earth, striving to break forth, causing a shaking, or sometimes a cleaving of the Earth, and thereby the Destruction of many People, Ruin of Building, (as of late hath been manifest) sinking of Mountains, raising of Valleys, &c.

But the Final Cause may be said to be the sign of an angry God, being justly provoked by the Scarlet Crimes of a sinful People, according to the Psalmist, *The Earth shook and trembled, the Foundations also of the Hills moved, and were shaken, because he was wroth,* Psal. 18. 7. Job 9. 5, 6.

Of Thunder and Lightning.

When an Exhalation hot and dry, mixt with moisture, is carried up into the middle Region, and there is inclosed in the Body of a Cloud. Now these two contraries being thus shut or encompassed in one place together, they fall at variance, whereby the Water and Fire agree not until they have broken through, so that Fire and Water fly out of the Cloud, the breaking thereof maketh a noise, which we call

H

Thunder,

Thunder, and the Fire Lightning, the Thunder being made first, but the Lightning first seen, because the sight is quicker than the hearing; for the sooner the Thunder is heard after the Lightning is seen, the nearer it is to us, *Job* 28. 26. and 38. 25. Altho' these Natural Causes may be attributed to these things, yet the Principal Cause is the Lord's doing, as may appear by the Citations.

Many other kind of Meteors, more strange, have been seen oftentimes in the Heavens, as Comets, Burning Dragons, &c. as appears in *Fulk* his Book of Meteors, which in this place are omitted.

But I shall insert some common Signs or Presages, foreshewing the change and alteration of the Weather, which happeneth truer often than Astrological Predictions; and first out of the Scripture.

South-wind or heat (in Summer) foreshews Whirlwind, *Job* 37. 9.

Cold, or fair Weather, is foreshewn by the North-wind, *Job* 37. 9. 22. for that

that driveth away Rain, *Prov.* 25. 23.

A red Sky in the Evening foreshews fair Weather, but in the morning foul Weather, *Mat.* 16. 2, 3.

A Cloud rising out of the West foreshews Rain, *Luke* 12. 54.

Southwind foreshews heat, *Luke* 12. 55.

This was upon the Main Continent.

Signs of Fair Weather.

Sun Rising bright and clear. If he drive the Clouds before him into the West. If at his Rising appears a Circle about him, and it vanisheth equally away. If he set red. The Moon clear three days after the Change, or three days before the Full. Clouds appearing with edges yellow. A Cloudy Sky clearing against the Wind. The Rainbow after Rain appearing meanly red. Mists coming down from the Hills, and settling in the Valleys; or white Mists rising from Waters in the Evening. Crows or Ravens gaping against the Sun. Beetles flying in the Evening. Batts flying abroad sooner than ordi-

nary. Many Flies or Gnats playing in the Sun-shine at Evening, &c.

Signs of Rain.

If the Sun be fiery red at his Rising. If he shew pale and wan. If red and black Clouds be about him at his Rising. If his Rays look dark or blue. If the Moon three or four days after the Change is blunt at both ends, the thicker the more. A Circle called *Halo* about the Moon. If the great Stars be only seen, and they look dim. The Rainbow appearing in a fair day, the greener it is the more Rain. Birds washing themselves. The Chattering of the Pye. Peacocks and Ducks often crying. The Owl crying Chiwit often. Swallows flying low. The working of the Spinner. Many Worms appearing above the Earth. The wallowing of Dogs. Beasts eating greedily, and licking their Hoofs. The biting of Fleas, Gnats, &c. The Soot falling much from Chimneys. The sweating of Stones. A Circle round a Candle. Aches in Ancient Peoples Limbs, or Corns. Bells heard at a farther

ther distance than usual. Sparks gathering together in the Fire. No Dew Morning nor Evening, &c.

Signs of Wind or Tempests.

Red Clouds appearing in a Morning. Much shooting of Stars. The Rainbow red. Black Circles with red streaks about the Sun or Moon. Stars dim and fiery. Autumn fair, a windy Winter. Clouds flying swift in the Air. Fire burning pale, or huzzing. Ravens clapping themselves with their Wings. The high flying of the Hern. Crying of Swine. The Herb Trefoil looking rough, &c.

Of the Four Seasons, or Quarters of the Year.

I. Of the Spring.

The Spring, or Vernal Quarter, begins when the Sun is said to touch the first Minute of the Equinoctial Sign Aries, (which is commonly in these days with us on the 9th of the first Month

Astronomically) thereby making the Days and Nights equal to all the World, the Sun then rising due East, and setting due West, having neither Right Ascension, Declination, nor Amplitude ; so this Quarter continues while he goeth through *Aries, Taurus,* and *Gemini*.

This Season is naturally hot and moist, the most Temperate in all the Year, being both pleasant and healthful, and most convenient for the removing of Diseases of long continuance, and also to prevent them for the future.

II. Of the Summer.

The Summer, or Estival Quarter, begins when the Sun (according to our Apprehension) touches the first minute of *Cancer*, (thereby making the longest Days and shortest Nights to those that dwell on the North-side of the Equinox) which usually happeneth upon the 11th of the 4th Month, and then he hath 6 hours Right Ascension, and farthest North Declination and Amplitude, which then decreaseth until he hath gone through *Cancer, Leo,* and *Virgo*. This

This Season is counted naturally hot and dry, for then the Sun with us is in his full height and strength, bringing to Perfection the Production of the Earth; and the time of gathering in the Harvest, is chiefly in the last part of this Quarter, although the next bears the name.

III. Of the Harvest.

The Harvest, or Autumnal Quarter, begins when the Sun is said to touch the first minute of *Libra*, (thereby making the Days and Nights again of equal length) which with us in these Days is usually upon the 12th day of the 7th Month called *September*, for then the Sun also Riseth due East, and sets due West, having 12 hours Right Ascension, but no Declination nor Amplitude; and he limiteth this Quarter, whlie he goeth through *Libra*, *Scorpio*, and *Sagitary*.

This Season is said to be Naturally cold and dry, (but often it proves moist) the Sun now withdraws his heat, and thereby causeth the falling of

the Leaves from the Trees, and the approach of Winter:

IV. *Of the Winter.*

The Hyemnal, or Winter Quarter, begins when the Sun is said to touch the first minute of the Southern Tropical Sign *Capricorn*, which with us is about the 11th of the 10th Month, called *December*, thereby making shortest days and longest nights to those that dwell on the North side of the Equinoctial, and the contrary to those that dwell on the South side, for then the Sun hath 18 hours Right Ascension, and is in his greatest South Declination and Amplitude, but soon returns again through *Capricorn*, *Aquaris*, and *Pisces*, finishing this Quarter.

This Season by some is counted cold and moist, being directly opposite to Summer, for now the Fields look barren, and the Trees naked.

While the Earth remaineth, Seed-time and Harvest, Cold and Heat, and Summer, and Winter, and Day, and Night, shall not cease, Gen. 8. 22.

This

This following Matter, concerning Gardening, I received from an Expert Gardener, which I have deliver'd in his own words, (*viz.*)

Notes of Gardening for every Month in the Year.

January.

PLant Vines, and lay them for increase, and plant Apple and Pear-trees, and all sorts of Wall-fruit Trees; if the Weather be open trim Wall-trees, cut and nail them; set and sow Kernels and Stones in this, and in the next Month, breaking the Stones or Shells, and sow only the Kernel; set Beans and Pease; cut, and set, and lay Roses; all these may be done the next Month.

February.

Now is a very good time for Grafting the forward sorts of Fruit-trees ; if the Weather be temperate, sow hardy Seeds, Pease, Beans, Radish, Parsnips, Carrots, Onions, Parsley, Spinage : Make up hot Beds for Melons, Cucumbers, and such like. Lay Branches of Vines, Roses, Woodbines, Jessamines, Laurustinus, Philleroy, Pyracantha, &c. Plant Goosberries, Currans, Rasberries, and begin to plant hardy Herbs towards the latter part of the Month ; transplant Cabbage and Colliflowers, sow Asparagus.

March.

This is the principal Month for Grafting all sorts of Fruit-trees, transplant all sorts of hardy Herbs and Flowers, make up hot Beds, for Cucumbers, Melons, Colliflowers to come late, the *Russia* Cabbage, and tender Flower-seeds, as *Amaranthus* of all sorts, *Africans* Marvail of Peru, &c. Sow most sorts of Garden-seeds, Endive,

dive, Succory, Leeks, Radish, Beets,
 Parsnips, Skirrets, Parsley, Sorrel,
 Bugloss, Borrage, Chervil, Sallery,
 Lettice, Radish, Onions, Orice, Pur-
 slain, Carrots, Cresses, Fennel, Spi-
 nade, Marigolds, &c. and most sorts
 of Flower-seeds; likewise Turnips in
 this and the next Month, to have them
 early. This is the principal Month
 for sowing of Seeds, and planting of
 Flowers and Slips; sow Pinks, and
 Carnations, and Gilliflowers, at the Full
 Moon, and the Seeds of all Winter-
 Greens: Plant out Colliflowers, and
 all sorts of Cabbages, where they are to
 stand, and likewise Carnation Layers
 in this and in the next Month.

April.

You may Graft some sort of Fruit-
 trees in the beginning of the Month;
 sow all Garden-seeds in dry Weather,
 and plant all sorts of Garden herbs in
 wet Weather: You may yet sow those
 sorts of Seeds spoke on in *March*; sow
 tender Seeds, as sweet Marjoram, Ba-
 sil, Pinks, Carnations, Hyssop, Thyme,
 Savory, and Purslain, *Dutch and Eng-*
lish

lish Savoyes ; set all sorts of Winter-Greens in this and in the former Month ; set Sage and Rosemary, sow Lettice, Spinnage, Chervil, and Cresses once in three or four Weeks, to have it young ; plant Cucumbers, Melons, and Artichokes.

May.

About the beginning, or within a fortnight under or over, sow *French* Beans in fine Mould ; sow tender Garden-seeds, as sweet Marjoram, Thyme, and Basil, *Dutch* and *English* Savoyes : Plant out Cucumbers and Amaranthus, &c. of the hot Bed : Take up Tulips, whose stocks are dry ; sow Purslain.

June.

The beginning of this Month sow *English* and *Dutch* Savoyes, sow Sallet-seeds, for later Sallets ; take up Bulbos Roots of Tulips, and Anemones, &c. sow Turnip-seed in this and the next Month, and transplant those Savoyes that were sowed the last Month ; plant slips of Myrile.

July.

July.

This is the principal Month to Inoculate Apricocks, Peaches, Nectarines, Roses, &c. prune your Wall-trees, lay Gilliflowers and Carnations; sow Lettice and Spinnage for later Salletting; transplant or remove Tulips, or other Bulbos Root; plant cuttings of Myrtles, but let them not have too much Sun at first.

August.

The beginning of this Month sow Cabbage and Colliflower-seed; prune superfluous Branches from Wall-fruit Trees, unbind the Buds you Inoculated a Month before if they take; sow Spinnage and Lettice for later Salletting; set cuttings of Bays, Laurustinus, Laurel, and Honisuckles, plant them rather in the shade than in the Sun; sow Larks-spur, Canditust, Columbines, *Robbin* in the Bush, and such hardy Plants that will indure the Winter; plant Strawberries, and other Garden Plants.

Sep-

September.

Transplant Colliflowers and Cabbage that were sowed in *August*; plant Tulips, and other Bulbos Roots you formerly took up; take off your Carnation Layers, and plant them where they are to stand the Winter; remove Fruit-trees from *September* till *March*, except in Frost; set cuttings of Bays, Laurel, &c. transplant most sorts of Herbs and Flowers.

October.

Set Beans and Pease; sow all sorts of Fruit-stones, Nuts, Kernels, and Seeds, either for Trees or Stocks, in this and the next Month; plant Rose-trees; plant your Bulbos Roots of all sorts; plant all Fruit-trees that have shed their Leaves; trench stiff Lands.

November.

Sow Beans and Pease; prune all sorts of Fruit-trees, and begin to cut and trim Wall-trees; lay up Carrots, Parsnips,

nips, Cabbages, either for your use, or for Seed; cover your Asparagus and Artichoaks; set Nuts and Kernels; yet you may plant Tulips.

December.

You may set Pease and Beans, if the Weather be moderate; set and transplant all sorts of Fruit-trees, as are not very tender, and subject to the injury of the Frost; prune Vines, if the Weather be open; nail and cut all sorts of Fruit-trees; sow Bay and Laurel-Berries, &c. dropping Ripe.

*Of the Imaginary Circles of the Sphere,
and some other Terms in Astronomy ex-
plained, for the easier understanding of
what is before expressed.*

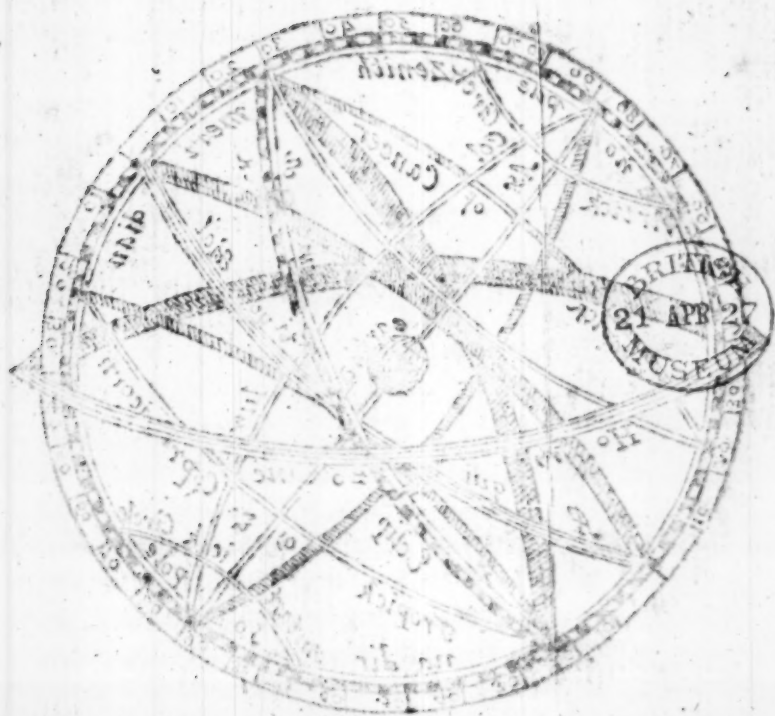
Equinoctial Circle, Equator, or Equinox, is a great Circle or Line equally distant from the two Poles of the World, dividing the Sphere in the midst.

Zodiack, is a broad Oblique Circle, crossing the Equinoctial in two opposite places, (*viz.*) in the beginning of γ , and in the beginning of π , so one half declines toward the North, the other towards the South; and in this Circle is comprehended the 12 Constellations, called the 12 Signs, *viz.* *Aries, Taurus, Gemini, Cancer, Leo, Virgo, Northern Signs, and Libra, Scorpio, Sagitary, Capricorn, Aquaris, Pisces, Southern Signs, every one containing 30 degrees in length, and 12 in breadth, being the same that is called Mazzaroth, in Job 38: 32. as saith Ed. Bond.*

Ecliptick Line, is a Line Imagined to go along the midst of the Zodiack as

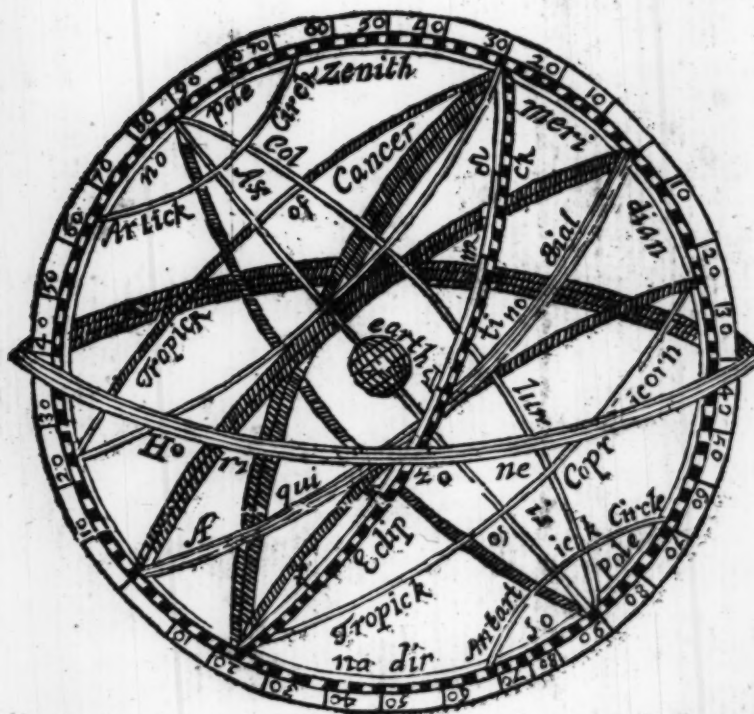
A Representation in Plans of the Circles of the Sphere
for the more entire Understanding of the following
Discourse concerning the same.

Plate III.



A Representation in Plane of the Circles of the Sphere
for the more easie understanding of this following
Discourse concerning the same.

Place this at page 148



of the Sphere,
his following

at page 149.



(149)

a Girdle, out of which the Sun never goeth, but the Moon and the other Planets are sometimes on the one side, and sometimes on the other side, which is called their Latitudes, only the fixed Stars alter not their Latitudes, whether great or small ; but the Longitude of a Star, is the Arch or part of the Ecliptick in degrees, between the beginning of *Aries*, and the Circle which passeth through the Poles of the Zodiack, and also through the Body of the Star ; where note, all Circles of the Sphere, or Heavens, whether they are large or small, have 360 degrees allowed to each of them.

Colures, are said to be two great moveable Circles, crossing each other at the Poles of the World, one cutting the Equinox at the beginning of *Aries*, and again at the beginning of *Libra* ; the other cutting the Ecliptick at the beginning of *Cancer*, and again at the beginning of *Capricorn*, so dividing the Globe into four equal parts.

Horizon, is said to be a great Circle which divideth the upper Hemisphere, (*viz.* the upper half of the World)
from

from the nether, we being always (supposed to be) in the midst.

Meridian, is said to be a great Circle passing through the Poles of the World, and the Poles of the Horizon, (called the *Zenith* and *Nadir*) on which the Sun always is just at Noon; and to go directly North or South, the Meridian is not changed; but to go East or West, it is changed; so 60 Miles either way maketh one degree, or 4 minutes of time difference under the Equinox, viz. 60 Miles Eastward, it is Noon 4 minutes sooner, and 60 Miles Westward 4 minutes later. Note, 60 Miles in this Parallel of Latitude, is not just a degree, but above a degree and half.

Tropicks, are supposed to be two lesser Circles parallel with the Equinoctial, and distant from it on either side 23 degrees 31 minutes each; the Ecliptick Line toucheth the Tropick of *Cancer* on the North side of the Equinox, and it toucheth the Tropick of *Capricorn* on the South side thereof, so the Sun hath his motion between these two Circles.

Artick Circle, is equally distance from the North Pole, as the Tropicks are distant from the Equinox, 23 degrees, 31 minutes.

Antartick Circle, is the same distance from the South Pole.

Zones, so called, are five in number, two Cold, two Temperate, and one hot, which are divided by the two Tropicks, and Polar Circles from each other; the hot Zone is counted between the two Tropicks, that is, extended from one to the other, being about 47 degrees, 2 minutes broad. The two Temperate Zones are extended from the Tropicks on either side to about 42 degrees, 58 minutes, that is Northward to the Artick Circle, and Southward to the Antartick Circle. And the two Cold Zones are each within those two small Circles, having the Poles for their Centre.

Poles of the World, are 2 Points exactly opposite to each other in the Heavens, one in the North, the other in the South, the Earth being in the midst, so that it seems to turn about as if it was born up by them; therefore by some it is termed the Axel-tree of the World,

World, as if there were a Line supposed to be drawn from one Pole through the Centre of the Earth to the other, and the Earth turning thereon, altho' without doubt it is upheld by Nothing but the mighty Power of the Lord, as in *Job* 26. 7. The Pole Artick, or North Pole, is elevated above our Horizon 51 degrees, and those Stars within that distance from it never set with us, but keep their Course round it daily; so likewise those that are at that distance from the South Pole, never rise with us, but perform their Course in the like order.

Zenith, is a Point supposed to be in the Heavens exactly over our Head, termed also the Vertical Point.

Nadir, is a Point said to be directly opposite to the Zenith, that is, perpendicular from it, through the Centre of the Earth, to the Heavens, seemingly under our Feet.

Azimuths, are supposed Lines or Circles of distance from the Meridian, drawn from the Zenith to any degree, or 2 degrees of the Horizon; or according to the 32 Points of the Mariners Compass, so that in Travelling or
Sailing

Sailing any way, supposing a Circle to go from our Zenith directly before us to the Horizon, is the Azimuth (called also the Vertical Circle).

Almicantharats, or Almadarats, or Circles of Altitude, are imagined Circles, passing through the Meridian, parallel with the Horizon.

Sphere, is a round Body representing the frame of the whole World, as the Circles of the Heavens and the Earth; this is sometimes called a Material Sphere, for the Orbs of the Planets are called their Spheres; that is, the Circles in which they move.

Ascension, is the rising of any Star, or of any part of the Ecliptick above the Horizon. Descension is its going down.

Right Ascension of a Star, is that part of the Equinox that riseth or setteth with the Star in a Right Sphere, but in an Oblique Sphere, it is that part of the Equinoctial in degrees, contained betwixt the first Point of *Aries*, and that place of the Equinoctial which passeth by the Meridian, with the Centre of the Star.

Oblique

Oblique Ascension, is a part of the Equinoctial in degrees, contained betwixt the beginning of *Aries*, and that part of the Equinox that riseth with any Star, or part of the Ecliptick in an Oblique Sphere.

Ascensional Difference, is the difference between the Right and Oblique Ascension, or the number of Degrees contained betwixt that place of the Equinox, that riseth with the Centre of a Star, and that place of the Equinox that cometh to the Meridian with the same Star.

Solstice, in the Summer, when the Sun is at the beginning of ♈, in the Winter, when he is at the beginning of ♏, because then the days seem to stand still, and neither increase nor decrease above 2 minutes in 10 or 12 days.

Constellation, is a certain number of Stars, supposed to be limited within some form or likeness, as *Aries* the Ram, is said to have 13 Stars, & the Bull 33 Stars. Of Constellations we read of in Scripture, *Isa.* 13. 10. *Arcturus*, *Orion*, &c. in *Job* 9. 8. are said to be Constellations, or Asterisms, *The Stars*

*Stars are numbred and named by the Lord
Psal. 147. 4.*

Perihelium, (so called) is the Point wherein the Earth (or any Planet) is nearest the Sun.

Aphelium, (so called) is the Point wherein the Earth (or any Planet) is farthest distance from the Sun.

Planets, are the Seven wandering Stars, called *Saturn*, *Jupiter*, *Mars*, the *Sun*, *Venus*, *Mercury*, and the *Moon*; the Name we read of in *2 Kings 23. 5.* but every particular one I do not remember they are mentioned in Scripture, but *Jupiter*, *Mercury*, *Acts 14. 12.* and *19. 35.* which were the Heathen Gods, as *Mars* was also: *Acts 17. 22.* mention is made of *Mars-hill*, where *Paul* stood to rebuke the Idolatry of the *Athenians*, which might probably be the place where they offered Sacrifice to *Mars*.

Now some of the Old Heathens is said to Deifie such among them that were highly esteemed of for their Noble Acts, of which they feigned several strange and ridiculous Things, as *Saturn*, taken by some for *Nimrod*, one of the most Antient, is termed the Father

ther of *Jove* or *Jupiter*, and *Mars* the Son of *Juno*, *Jupiter's* Sister and Wife: *Jupiter* was called also Father of *Phæbus* and *Phœbe*, Twins by *Latona*, called *Sol* and *Luna*, that is, the Sun and Moon: And *Mercury* also was termed Son of *Jupiter* by *Maia*; but *Venus* is feigned to be Engendred in the Froth of the Sea by the means of *Saturn*, &c. So thus these Heathens feigned sundry strange things of such Memorable Mortal Men and Women among them, that after this Life they thought to have been Translated into Stars, &c. to shew their Immortal state, and there to be worshipped as Gods; but we are not to learn their ways, *Jer.* 10. 2. But to return, all these Seven Planets (the Sun and Moon excepted) sometimes seem to us to stand at a stay moving neither forward in their proper Course like the Sun and Moon, through the Signs of the Zodiack, nor moving the contrary way backward, which is called their being Stationary, happening between their being Direct and Retrograde.

Direct, is their moving in their natural Course, (i. e.) forward.

Retro-

Retrograde, is their moving backward, or contrary thereunto.

Combust, is said to be their being under the Sun-beams, or within 8 degrees of him.

Oriental, when a Planet riseth before ☉ ; Occidental, after.

Latitude of the Earth, is the distance or breadth on either side of the Equinox towards the Poles, and they that are under the Equinox have no Latitude, but the Poles of the World are in their Horizon, this is a right Sphere, and every 60 Miles directly North or South, is said to make one degree of Latitude, and the height of either Pole above the Horizon, is answerable to the degree of Latitude, in an Oblique Sphere, as *London* is counted to be in the Latitude of 51 degrees, 32 minutes North, the Pole there being elevated as much ; the like is to be observed in any other Place or Region.

Longitude of the Earth, is the outside thereof extended from West to East, crossing the Latitude at Right Angles, the beginning thereof (by some) is at the *Canary* Isles, so going Eastward quite round the World unto the

same place again, which is 360 degrees, and under the Equinoctial is reputed to be 21600 Miles, reckoning 60 Miles to a degree, but the farther off the Equinoctial the fewer Miles are in a degree; for at *London* about 37 make a degree of Longitude; so these degrees grow less and less, until they all meet in the Latitude of 90, that is, under the Poles.

Parallels, are Lines straight or circular, equally distant from each other, as the Equinox Tropicks, and degrees of Latitude, &c.

Climate, or Clime, is such a space of Earth comprehended betwixt two Parallels, in which space there is half an Hours difference in the Sun-dials and length of the Days.

Antipodes, are said to be those whose Feet are directly against ours, as if a Line were drawn from one, through the Centre of the Earth to the other.

If I should insert such Names, and their Significations, as might be mentioned, belonging to the Mathematical Sciences, it would take up more room than I purposed it should, therefore I think this may suffice.

PART II.

Of Scripture Measures, Weights,
Money's, &c. reduced unto the
Understandings of the Vulgar.

Of Measures in Length.

AN Hairs breadth, is called the
48th part of an Inch, and so
exact could the Men of *Benjamin* sling
Stones, *Judg.* 20. 16.

A Fingers breadth, is somewhat less
than an Inch.

An Hands breadth, is three Inches,
which was the thickness of the Molten
Sea which *Solomon* made, *1 Kings* 7.
26.

A Span, is a quarter of a Yard, or
9 Inches; it is said *Goliath* of *Gath* was
Six Cubits and a Span in heighth, *1 Sam.*

17. 4. which is three Yards and a quarter, being the common Cubit, as is thought.

A Foot, is 12 Inches, or the third part of a Yard.

A common Cubit, is a Foot and an half, or half a Yard.

An Holy Cubit, is two of the common Cubits, or a Yard, supposed to be the Cubit that the Tabernacle and its Appurtenances were measured by, *Exod.* 25, 26, 27 Chap.

The Kings Cubit, is 3 Inches more than the common Cubit, *viz.* a Foot and 9 Inches.

A Fathom, is 2 Yards, when *Paul* suffered Shipwrack, they founded and it was first 20 Fathoms, afterwards 15, *Acts* 27. 28.

A Reed, is said to be Six common Cubits, and an Hands breadth, *Ezek.* 40. 4. by which the Holy City was measured, Chap. 42. 20.

A Pace, is 5 Foot.

A Furlong, is 125 Paces; *Emmanuel* was about Threescore Furlongs from *Jerusalem*, *Luke* 24. 13. being 7 Miles and an half.

A Mile is 8 Furlongs, or 1000 Paces with us, but in Hebrew it is half a days Journey.

A Sabbath-days Journey is 600 Paces; so far was *Mount Olivet* from *Jerusalem*, Acts 1. 12.

Of Dry Measures.

A Cab, or Kab, is a Quart, the 4th part of a Cab of Doves Dung, was sold for Five Pieces of Silver Valued at Twelve Shillings and Six Pence, 2 Kings 16. 29.

An Omer, is about 3 Pints and an half, being the 10th part of an Ephah; an Omer of Manna was kept for a Memorial by the Lord's Command, *Exod.* 16. 32, 33.

A Tenth-deal, is supposed to be about the like measure, *Exod.* 29. 40.

A Measure, or Seah, is said to be 6 Quarts, or a Gallon and half, though some have supposed it to be a Bushel; but it is not likely, for *Boaz* gave *Ruth* 6 Measures of Barley in her Vail, and laid it upon her, and she carried it into the City to her Mother-in-law, which doth seem incredible, for a Woman to

carry 6 Bushel of Barley in a Vail, *Ruth* 3. 15.

An Ephah, is half a Bushel and a Pottle, or 10 Omers, *Exod.* 16. 36.

An Homer, or Cor, according to *Ezek.* 45. 11, 14. is five Bushels, and five Gallons, being ten Baths, or Ephahs; for it is generally granted, that an Ephah is as aforesaid, though an Homer some take to be 14 Bushels and a Pottle. An Homer of Barley seed was Valued at Fifty Shekels of Silver, *Lev.* 27. 16. which is computed to be six Pounds five Shillings, according to the Shekel of the Sanctuary.

Of Liquid Measures.

A Leg, is generally taken to be half a Pint, or the quantity of six Egg shells, *Lev.* 14. 10.

A Pot, or Sextary, is said to be a Pint and an half.

A Hin, is 12 Logs, or three Quarts, *Exod.* 29. 40.

A Bath, by some is taken to be 9 Gallons and 3 Quarts; but if it be equal to an Ephah, as in *Ezek.* 45. 11. it is but 4 Gallons and a Pottle.

A Firkin, is taken by some to be four Gallons and an half, *John 2. 6.* but with us it is nine Gallons ; and *Hen. Jesse* speaks as if three Firkins contained about six Baths, which if so, it doth further confirm a Bath to be but four Gallons and an half, if a Firkin be nine Gallons.

Of Weights and Moneys.

A Gerah, is 16 Barley-corns weight, in Value one Penny Half-penny.

A Drachm, or Penny, the 8th part of an Ounce, or seven Pence Half-penny, *Mat. 20. 2, 9, 10. Luke 10. 35.*

An Assarion, or Assary, or Farthing, the 10th part of that Penny, in Value Half-penny Farthing, *Mat. 10. 29. Luke 12. 6.*

Quadrans, or two Mites, the 4th part of Assaron, Valued near a Farthing.

A Common Shekel in weight, was a quarter of an Ounce, and in Silver Valued at 15 Pence, but in Gold 15 Shillings.

The King's Shekel in weight, was three Drachms, and in Silver Valued

at One Shilling 10 Pence Half-penny,
but in Gold One Pound Two Shillings
Six Pence.

The Shekel of the Sanctuary, or Holy Shekel, which is 20 Gerahs, (*Exod.* 30. 13. *Ezek.* 45. 12.) or half an Ounce, being worth in Silver Two Shillings Six Pence, but in Gold One Pound 10 Shillings.

A Piece of Silver, or a Silvering, often mentioned in Scripture, is taken to be the Value of an Holy Shekel, *viz.* Two Shillings Six Pence.

A Mina, or Pound, containing about 12 Ounces and an half, and worth in Silver Three Pounds Two Shillings Six Pence, being 25 Holy Shekels; and in Gold 37 Pound 10 Shillings, proportionably.

A Common Talent in weight is 62 Pound and a half, worth in Silver 187 Pounds 10 Shillings, in Gold 2250 Pounds, which is 3000 Common Shekel.

The King's Talent, is 3000 of the King's Shekles, or 1125 Ounces, and worth 281 Pounds 5 Shillings in Silver, and 3375 Pounds in Gold.

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The Talent of the Sanctuary, is also 3000 of those Shekels, or 1500 Ounces, which is in Silver 375 Pounds, and in Gold 4500 Pounds.

Note, according to this Computation Gold was Valued at 12 times its weight in Silver, viz. one Ounce of Gold was worth 12 Ounces of Silver, but now it is worth about one quarter more, viz. 16 Ounces.

Of divers sorts of Weights and Measures used in *England*; and first,

Of Troy-weight.

This is reputed to be the most Antient Weight now in use, by which is weighed Gold, Silver, Precious Stones, Bread, &c. Its parts are divided into Pounds, Ounces, Penny-weights, Grains. Also Physicians divide this Pound into Ounces, Drachms, Scruples, and Grains; and according to this Weight, all Medicines are prescribed, or ought to be; and often in Physical Receipts, for these Names, and others, instead thereof are put

acters, the signification of some of which I have here shewn, as,

1. *R* Receive, or take ; this is usually at the beginning.

2. *Gr. Grana*, a Grain of Wheat, the least of all Weights.

3. *℥ Scrupuli*, a Scruple, 20 Grains.

4. *℥ Drachma*, a Drachm, or Dram, being 3 Scruples.

5. *℥ Uncia*, an Ounce, containing 8 Drams.

6. *Qu. Quar*, a Quart of any thing.

7. *℔ Libra, Libra*, is a Pound, 12 Ounces.

8. *β. Semis*, is the half of any Weight or Measure.

9. *M. Manipuli*, is a great Handful.

10. *P. Pugilli*, a Pugil, a small Handful.

11. *Ana*, signifieth of every one a like quantity.

12. *q. l. quantum satis*, a sufficient quantity.

But

But for the better understanding of these kind of Weights, I have here added these two small Tables.

A Table of Troy Weights.

Grains.

24 | Penny-weights.

480 | 20 | Ounces.

5760 | 240 | 12 | Pounds.

A Table of Physical Weights.

Grains.

20 | Scruples.

60 | 3 | Drachms.

480 | 24 | 8 | Ounces.

5760 | 268 | 96 | 12 | Pounds.

Explanation.

In the Table of Physical, or Apothecaries Weights, at the top stands Grains, and under them 20 again 8 Scruples,

Scruples, shewing that 20 Grains is a Scruple, then under 20 is 60, which shews 60 Grains, or 3 Scruples, is a Dram; then under 60 is 480, shewing there is so many Grains in an Ounce, or 24 Scruples, or 8 Drams; then under 480 is 5760, shewing there is so many Grains in a Pound, and 268 Scruples, 96 Drams, 12 Ounces. All the other Tables standing in this form and order, are to be understood in the same manner, according to each Denomination belonging thereunto.

7

A

A Table of the Affize of Bread.

Price	Troy Weight.						Averdupois Weight.						12d Loaf	
	White	Wheat	Houf.	Whit.	Whe.	Houf.	White	Whe.	Houf.	Ho. Aver	Ho. Aver			
9 d.	o. dw.	o. dw.	o. dw.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.	o. dr.
2 0	12	1	18	2	24	3	13	4	19	14	26	8	19	13
2 3	11	5	16	17	22	10	12	6	18	8	24	12	18	10
2 6	10	11	15	17	21	2	11	9	17	6	23	3	17	6
2 9	6	19	14	18	19	18	10	15	16	6	21	13	16	5
3 9	9	7	14	1	18	15	10	5	15	7	20	10	15	7
3 3	8	18	13	7	17	16	9	12	14	10	19	8	14	0
3 6	8	9	12	13	16	18	9	4	13	14	18	8	13	14
3 9	8	1	12	1	16	2	8	13	13	4	17	11	13	3
4 0	7	14	11	10	15	7	8	7	12	10	16	14	12	10
4 3	7	7	11	0	14	14	8	1	12	1	16	2	12	1
4 6	7	1	10	11	14	2	7	11	11	9	15	7	11	9
4 9	6	15	10	3	13	10	7	7	11	2	14	13	11	1
5 0	6	10	9	15	13	0	7	2	10	11	14	4	0	11
5 3	6	5	9	7	12	10	6	14	10	4	13	12	0	4
5 6	6	0	9	1	12	1	6	10	9	15	13	4	9	14
5 9	5	16	8	15	11	13	6	6	9	9	12	13	9	9
6 0	5	0	8	9	11	5	6	3	9	4	12	6	9	4
6 3	5	9	8	3	10	18	6	0	9	0	12	0	8	15
6 6	5	5	7	10	10	11	6	13	8	11	11	9	8	11
6 9	5	2	14	10	5	5	10	8	7	11	4	8	6	14
7 0	4	19	7	9	9	18	5	7	8	3	10	14	8	2
7 3	4	16	7	5	9	13	5	5	7	15	10	9	7	15
7 6	4	14	7	1	9	8	5	2	7	12	10	4	7	11
7 9	4	11	6	17	9	2	5	0	7	8	10	0	7	8
8 0	4	9	6	13	8	18	4	14	7	5	9	12	7	5
8 3	4	6	6	10	8	13	4	12	7	2	9	8	7	2
8 6	4	4	6	6	8	5	4	10	6	15	9	4	6	15
8 9	4	2	6	3	8	5	4	8	6	12	9	0	6	12
9 0	4	0	6	0	8	1	4	6	6	10	8	13	6	9
9 3	3	18	5	18	7	17	4	5	6	7	8	10	6	7
9 6	3	16	5	15	7	13	4	3	6	5	8	7	6	5
9 9	3	15	5	12	7	10	4	2	6	3	8	4	6	2
0 0	3	13	5	10	7	7	4	0	6	0	8	1	6	0
0 3	3	11	5	8	7	4	3	15	5	5	7	14	5	14
0 6	3	11	5	6	7	2	2	14	5	12	7	12	5	12

The Use of this Table of Assize of Bread.

First, the price of Wheat must be known, that is, of the middle sort, then find it out in the first Column, (for there it is from 2 Shillings to 10 Shillings 6 Pence, encreasing by 3 Pence a Bushel) and against the same is the weight of a Penny Loaf, both White, Wheaten, and Household, in Troy and Averdupoiz Weight. That the Free-Bakers of *London* are obliged to give for a Penny; the Titles at the top shew the use of every Column, and the last of them is the weight of a 12^d Loaf, answering to the Prizes of Wheat as aforesaid, the Baker being allowed 1 s. 6 d. per Bushel for Baking: Now the Weekly Bills having therein the weight of Bread, for both Weights, which weights also being found here, doth shew the price that Wheat then beareth. And also, by this Table is found out the proportion between the Pound Troy, and the Pound Averdupoiz, for one Pound Troy is near equal to 13 Ounces 3 Drams Averdupoiz, and one Pound Averdupoiz is near equal to 14

Ounces.

Ounces 11 Penny-weight Troy; and 73 Pounds Troy to be equal to 60 Pounds Averdupoiz; so by this proportion with each other, it appears that the Ounce Troy is greater than the Ounce Averdupoiz, and the Pound Averdupoiz is greater than the Pound Troy.

Of Averdupoiz, or Avoir-du-poiz Weight.

By which is weighed all Grocery Wares, Silk, Worsted, Thread, Butter, Cheese, Tallow, Flesh, Wax, Rosin, Pitch, Lead, Hemp, Iron, Copper, Tin, &c.

This Weight is divided into these Denominations, as Drams, Ounces, Pounds, Hundreds, Tuns; concerning which peruse the following Table.

A Table of Averdupoiz Weight.

Drachms.

16	Ounces.			
256	16	Pounds.		
7168	448	28	Quarter C.	
18672	1792	112	4	Hundreds.
573440	35840	2240	80	201 Tuns.

A Useful Table, whereby knowing the Price of a Pound,
the Price of a 100 weight is found, and contrariwise.

Pr. Po.				Pr. Hun.				Pr. Po.				Pr. Hun.			
d.	q.	l.	s.	d.	d.	q.	l.	s.	d.	d.	q.	l.	s.	d.	
1			2	4	1		3	17	0	1		7	11	8	
2			4	8	2		3	19	4	2		7	14	0	
3			7	0	3		4	1	8	3		7	16	4	
1			9	4	9		4	4	0	17		7	18	8	
1			11	8	1		4	6	4	1		8	1	0	
2			14	0	2		4	8	8	2		8	3	4	
3			16	4	3		4	11	0	3		8	5	8	
2			18	8	10		4	13	4	18		8	8	0	
1	1		1	0	1		4	15	8	1		8	10	4	
2	1		3	4	2		4	18	0	2		8	12	8	
3	1		5	8	3		5	0	4	3		8	15	0	
3	1		8	0	11		5	2	8	19		8	17	4	
1	1	10	4		1		5	5	0	1		8	19	8	
2	1	12	8		2		5	7	4	2		9	2	0	
3	1	15	0		3		5	9	8	3		9	4	4	
4	1	17	4	12			5	12	0	20		9	6	8	
1	1	19	8		1		5	14	4	1		9	9	0	
2	2	2	0		2		5	16	8	2		9	12	4	
3	2	4	4		3		5	19	0	3		9	13	8	
5	2	6	8	13			6	1	4	21		9	16	0	
1	2	9	0		1		6	3	8	1		9	18	4	
2	2	11	4		2		6	6	0	2		10	0	8	
3	2	13	8		3		6	8	4	3		10	3	0	
6	2	16	0	14			6	10	8	22		10	5	4	
1	2	18	4		1		6	13	0	1		10	7	8	
2	3	0	8		2		6	15	4	2		10	10	0	
3	3	3	0		3		6	17	8	3		10	12	4	
7	3	5	4	15			7	0	0	23		10	14	8	
1	3	7	8		1		7	2	4	1		10	17	0	
2	3	10	0		2		7	4	8	2		10	19	4	
3	3	12	4		3		7	7	0	3		11	1	8	
8	3	14	8	16			7	9	4	24		11	4	0	

There are many other Denominations of these Weights in several Counties of *England*, as Stones, Cloves, Todds, Rooves, Weighs, Loads, Fathens, &c. according to the Commodity bought or sold: In *London* Fleth is often sold by the Stone, which is 8 Pounds, but in some places is 14 Pound.

A Table of the Names of the Weights of Wooll.

Pounds.

14	Stones.			
28	2	Todds.		
182	13	$6\frac{1}{2}$	Weighs.	
364	26	13	2	Sacks.
4368	312	156	24	12 Last.

Something of the Proportion of the Weights of Metals with each other.

Alchimists usually call the Names of the Seven Metals, by the Names of the Seven

Seven Planets, as *Saturn* Lead, *Jupiter* Tin, *Mars* Iron, *Sol* Gold, *Venus* Copper, *Mercury* Quicksilver, *Luna* Silver.

Now suppose there were cast Seven Balls, or Bullets, of these several Metals, all in one Mould, and their weights compared together, which proportion is said to be as followeth, with each other, supposing that of Gold to contain 12 Ounces, or 1 Pound Troy.

	Oz.	D.	Gr.	Grains in each.
1. Gold	12	00	00	5760
2. Quicksilver	8	16	10	4234
3. Lead	7	05	16	3496
4. Silver	6	10	12	3132
5. Copper	5	12	14	2602
6. Iron	5	01	01	2425
7. Tin	4	13	11	2243

Hence it appears that Gold (the purest of Metals) is the most weighty, for it is heavier than Lead above one third part, and heavier than Silver by almost half, and Tin being the lightest of all Metals.

Of Money.

I think few, or none, are Ignorant of the Pieces of Money called the Currant Coyn of *England*, that all Sums are made up withal; which usual Denominations are Pounds, Shillings, Pence, Farthings; of which are made other Names, or small Sums sometimes mentioned, as Greats, Testons, Crowns, Nobles, Angels, and Marks; and according to most of these Denominations I have formed this Table, shewing the Value of each.

A Table of *English* Money.

Farthings.

4 Pence.

48 Shillings.

240 Crowns.

320 Nobles.

480 Angels.

640 Marks.

960 Pounds.

A Table of Time.

Minutes.				
60	Hours.			
1440	24	Days.		
10080	168	7	Weeks.	
40320	672	28	4	Months.
525960	8766	365 $\frac{1}{4}$	52,30h.	13,30h. Ye.

This Table of Time I thought meet to insert after that of Money, because the ensuing Tables have a part in both, but the Months there mentioned are common, *viz.* 12 in the Year, in the Tables of Interest.

• Money in these Days being often Let out at 5 *per Cent.* the Interest is so easily known, it needs no Table to shew it, for such a number of Pounds in a Year comes to so many Shillings, in half a Year so many Six-pences, &c. which is very easie to compute.

An easie Table, shewing the Interest due upon any Sum of Money, from 5 Shillings to a 100 Pounds, for a Year. or under, at 6 per Cent.

	1 Mon.			3 Mon.			6 Mon.			9 Mon.			A Year			
	s.	d.	q.	s.	d.	q.	s.	d.	q.	s.	d.	q.	s.	d.	q.	
	5	0	0	1	0	0	3	0	1	3	0	2	2	0	3	2
	10	0	0	2	0	1	3	0	3	2	0	5	1	0	7	0
	15	0	0	3	0	2	2	0	5	1	0	8	0	0	10	2
Pounds.	1	0	1	0	0	3	2	0	7	0	0	10	2	1	2	1
	2	0	2	1	0	7	0	0	2	1	1	9	1	2	4	2
	3	0	3	2	0	10	3	1	9	2	2	8	1	3	7	0
	4	0	4	3	1	2	1	2	4	2	3	6	3	4	9	0
	5	0	6	0	1	6	0	3	0	0	4	6	0	6	0	0
	6	0	7	0	1	9	2	3	7	0	5	4	2	7	2	1
	7	0	8	1	2	1	0	4	2	1	6	3	2	8	4	2
	8	0	9	2	2	4	2	4	9	1	7	2	1	9	6	3
	9	0	10	3	2	8	1	5	4	2	8	1	0	10	9	0
	l. s. d.			l. s. d.			l. s. d.			l. s. d.			l. s. d.			
Tens of Pounds.	10	0	1	0	0	3	0	0	6	0	0	9	0	0	12	0
	20	0	2	0	0	6	0	0	12	0	0	18	0	1	4	0
	30	0	3	0	0	9	0	0	18	0	1	7	0	1	16	0
	40	0	4	0	0	12	0	1	4	0	1	16	0	2	8	0
	50	0	5	0	0	15	0	1	10	0	2	5	0	3	0	0
	60	0	6	0	0	18	0	1	16	0	2	14	0	3	12	0
	70	0	7	0	1	1	0	2	2	0	3	3	0	4	4	0
	80	0	8	0	1	4	0	2	8	0	3	12	0	4	16	0
	90	0	9	0	1	7	0	2	14	0	4	1	0	5	8	0
100	0	10	0	1	10	0	3	0	0	4	10	0	6	0	0	

The Use of the Table.

Find the Principal in the first Column, and against it is the Interest due, for 1, 3, 6, 9, or 12 Months, as the Titles express.

A Table of Rebate, at Six Per Cent. from Five
Shillings to a Thousand Pounds.

		6 Months.			9 Months.			12 Months.		
		s.	l.	s. d. q.	l.	s.	d. q.	l.	s.	d. q.
Pounds.	5			1 3			2 2			3 1
	10			3 2			5 1			6 3
	15			5 0			7 3			10 0
	1			6 3			10 1		1	1 2
	2		1	1 3		1	8 2		2	3 0
	3		1	8 3		2	7 0		3	4 3
	4		2	3 3		3	5 1		4	6 1
	5		2	10 3		4	3 2		5	7 3
	6		3	5 3		5	2 0		6	9 2
	7		4	0 3		6	0 2		7	11 0
Tens of Pounds.	8		4	7 3		6	10 3		9	0 2
	9		5	2 3		7	9 0		10	2 1
	10		5	9 3		8	7 1		11	3 3
	20		11	7 3		17	2 2		1	2 7 3
	30		17	5 3		1	5 10 0		1	13 11 2
	40	1	3	3 2		1	14 5 1		2	5 3 1
	50	1	9	1 2		2	3 0 3		2	16 7 1
	60	1	14	11 2		2	11 8 0		3	7 11 0
	70	2	9	0 1		3	0 3 2		3	19 2
	80	2	6	7 1		3	8 10 3		4	10 6 3
	90	2	12	5 0		3	7 6 0		5	1 10 2
	100	2	18	3 0		4	6 1 2		5	13 2 2
	200	5	16	6 0		8	12 3 0		11	6 5 0
	300	8	14	9 0		12	18 4 2		16	19 7 2
	400	11	13	0 0		17	4 5 3		22	12 10 0
	500	14	11	3 0		21	10 7 2		28	6 0 1
	600	17	9	6 0		25	16 9 0		33	19 2 3
	700	20	7	9 1		30	2 10 2		39	12 5 1
	800	23	6	0 1		34	18 11 3		45	5 7 3
	900	26	4	3 1		38	15 1 1		50	18 10 1
	1000	29	2	6 2		43	1 3 0		56	12 0 3

The Use of the Table of Rebate, or Discount.

This way of Rebatement is usually amongst Men of great Dealings, for Large Sums of Money; as when a Commodity is sold, and to be paid at a certain time, that is, in 1, 2, 3, 6, or 12 Months after, then upon Consideration the Seller is paid ready Money, and the Buyer condescends to it, only Discounting or Rebating according to the Time and Sum agreed upon, which by this Table almost any Sum, according to the time therein mentioned, may be found, by the help of Addition. As suppose 865 *l.* is to be paid 6 Months after the Commodity bought.

Look in the first Column } *l. s. d. q.*
for 800, out of which } 23 06 00 1
is to be Rebated

Then look 60, out of }
which is Rebated } 01 14 11 2

Then look 5, out of }
which is to be Rebated } 00 01 05 1

All being added together, the Sum is } 25 02 05 0

The

The like is to be observed in any other Sum. But if the number of Months is not inserted in the Table, the Addition of Time must not be used, for double the Rebatement of 6 Months for a 100 Pound, and it exceeds the Rebate for 12 Months, by 3 s. 3 d. 2 q. Therefore to find it for any number of Months not here expressed, do thus, first reduce the whole Sum into Pence, then multiply those Pence by the number of Months to be Rebated for, the Product thereof divide by 200, and the said number of Months, then the Quotient will be the Sum in Pence to be Rebated.

Example.

What is the Rebate of 300 Pounds for 8 Months at 6 per Cent. 300 Pounds being reduced into Pence hath 72000, which Pence being multiplied by 8, (the 8 being for the time given) produceth 576000, the which divide by 208, the Quotient will be 2769 Pence, and about one Farthing, being brought into Pounds, makes 11 l. 10 s. 9 d. 1 q. which is the Sum to be Rebated out of 300 Pounds for the 8 Months Discount, and no more. So by this Rule the Tables may be Enlarged, or Proved.

I. Table.				II. Table.		III. Table.			
Years Leaf.	Years.	Months.	Days.	s.	d.	l.	s.	d.	q.
1	0	11	0	18	10	1	0	0	0
2	1	9	27	17	9	2	1	2	1
3	2	8	3	16	9	3	3	8	0
4	3	5	27	15	10	4	7	5	3
5	4	2	15	14	11	5	12	8	2
6	4	11	0	14	1	6	19	6	0
7	5	7	0	13	4	8	7	10	2
8	6	2	15	12	6	9	17	11	0
9	6	9	18	11	10	11	9	9	3
10	7	4	9	11	2	13	3	7	1
11	7	10	21	10	7	14	19	5	0
12	8	4	18	9	10	16	17	4	2
13	8	10	9	9	4	18	17	7	2
14	9	3	18	8	10	21	0	3	2
15	9	8	15	8	4	23	5	6	0
16	10	1	9	7	10	25	13	5	1
17	10	5	24	7	5	28	4	2	2
18	10	9	27	7	0	30	18	1	1
19	11	1	9	6	7	33	15	2	1
20	11	5	21	6	3	36	15	8	1
21	11	9	9	5	10	39	19	10	0
22	12	0	15	5	6	43	7	9	3
23	12	3	18	5	3	46	19	10	3
24	12	6	18	4	11	50	16	3	2
25	12	9	4	4	8	54	17	3	1
26	13	0	0	4	5	59	3	1	1
27	13	2	15	4	2	63	14	1	0
28	13	4	27	3	11	68	10	6	0
29	13	7	3	3	9	73	12	3	1
30	1	9	6	3	7	79	1	1	2

The Use of these three foregoing Tables, in Examples.

I. *A Useful Table, shewing what Years of Purchase a Lease or Annuity is worth at present upon Interest at 6 per Cent. for 30 Years.*

Example.

Suppose a Lease or Annuity to continue 10 Years, and thou desire to know how many Years Purchase it is worth in Ready Money, look in the first Column under Years Lease (which also serves for the other Tables) for 10, and against the same is 7 Years 4 Months 9 Days Purchase.

II. *A Table of Reversions at 6 per Cent. for 30 Years, or under.*

Example.

Suppose I am to receive 20 Shillings 14 Years hence, what is it worth in Ready Money? Look 14 in the first
K 2 Column,

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Column, and against it is 8 s. 10 d. the Value in Ready Money.

III. *A Table of the Increase of One Pound Rent, Interest upon Interest forborn, for 30 Years, or under, at 6 per Cent.*

Example.

Suppose 20 s. per *Annum* Rent be forborn 19 Years with the Interest, what comes the whole to? Look 19 in the first Column, and against it is 33 l. 15 s. 2 d. 1 q. and if any of these Tables are reckoned for several Years, the Sums must be accordingly multiplied; as in the first, 10 Years, at 10 l. a Year, comes to 73 l. 11 s. 8 d. and so of the rest.

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A plain and easie Table, (shewing what one daily Expence will amount unto, in a Week, Month, or Year.

Farthings.	By the We.			By the Mo.			By the Year.			
	s.	d.	q.	s.	d.	q.	l.	s.	d.	q.
1	0	1	3	0	7	0	0	7	7	1
2	0	3	2	1	2	0	0	15	2	2
3	0	5	1	1	9	0	1	2	9	3
Pence by the Day.	l. s. d.			l. s. d.			l. s. d.			
1	0	0	7	0	2	4	1	10	5	
2	0	1	2	0	4	8	3	0	10	
3	0	1	9	0	7	0	4	1	3	
4	0	2	4	0	9	4	6	1	8	
5	0	2	11	0	11	8	7	12	1	
6	0	3	6	0	14	0	9	2	6	
7	0	4	1	0	16	4	10	12	11	
8	0	4	8	0	18	8	12	3	4	
9	0	5	3	1	1	0	13	13	9	
10	0	5	10	1	3	4	15	4	2	
11	0	6	5	1	5	8	16	14	7	
Shillings by the Day.	l. s. d.			l. s. d.			l. s. d.			
1	0	7	0	1	8	0	18	5	0	
2	0	14	0	2	16	0	36	10	0	
3	1	1	0	4	4	0	54	15	0	
4	1	8	0	5	12	0	73	0	0	
5	1	15	0	7	0	0	91	5	0	
6	2	2	0	8	8	0	109	10	0	
7	2	9	0	9	16	0	127	15	0	
8	2	16	0	11	4	0	146	0	0	
9	3	3	0	12	12	0	164	5	0	
10	3	10	0	14	0	0	182	10	0	
11	3	17	0	15	8	0	200	15	0	
12	4	4	0	16	16	0	219	0	0	
13	4	11	0	18	4	0	237	5	0	
14	4	18	0	19	12	0	255	10	0	
15	5	5	0	21	0	0	273	15	0	
16	5	12	0	22	8	0	292	0	0	
17	5	19	0	23	16	0	310	5	0	
18	6	6	0	25	4	0	328	10	0	
19	6	13	0	26	12	0	346	15	0	
20	7	0	0	28	0	0	365	0	0	

A Computation of the Value of several Foreign Coyns with the English Money.

	s.	d.	q.
A Sultain, <i>Turkish</i>	7	6	0
A Duccatoon, 63 Stivers	6	4	0
A Duccat, <i>Spanish</i>	5	6	0
A Duccat, <i>Portugal</i>	5	0	0
A Seraphis, <i>Turkish</i>	5	0	0
A Lion Dollar, 40 Stivers	4	0	0
A Common, or Zealand Dollar, 30 Stivers	3	0	0
A Florin, or Gilder, 20 Stivers	2	0	0
A Liver, <i>French</i>	1	8	0
A Mark, <i>Scotch</i>	1	1	2
A Harper, <i>Irish</i>	0	9	0
A Ryal, <i>Spanish</i>	0	6	0
A Obb, <i>Irish</i>	0	4	2
A Stiver, <i>Dutch</i>	0	1	4
An Asper <i>Turkish</i>	0	1	1
A Sou, <i>French</i>	0	1	0
A Mervedis, <i>Spanish</i>	0	0	3
A Ree, <i>Portugal</i>	0	0	3
A Denier, <i>French</i>	0	0	3

In English is about the Value of

Of

Of Measures in Length.

Measures of Cloth, Linnen, Silk, &c. are divided into Ells, Yards, Quarters, and Nails; one Nail is 2 Inches $\frac{1}{4}$.

4 Nails	} make	1 Quarter.
3 Quarters		1 Ell Flemish.
4 Quarters		1 Yard.
5 Quarters		1 Ell English.

The Denominations of Longitude, by which the distance from one place to another is measured, are set in this following Table, the least of all is a Barley-corns length, the greatest on Land, in this Nation, is a Mile, 3 Miles is a League at Sea.

A Table of Long Measure.

Barley-corns.

3	Inches.					
36	12	Feet.				
108	36	3	Yards.			
594	198	$16\frac{1}{2}$	$5\frac{1}{2}$	Poles.		
23760	7920	660	220	40	Furlo.	
190080	63360	5280	1760	320	8	Mi.

A Table of Square, or Superficial Measure.

Inches.

144	Feet.				
1296	9	Yards.			
39204	$272\frac{1}{4}$	$30\frac{1}{4}$	Rods.		
6272640	43560	4840	160	Acres.	
1014489600	27878400	3097600	102400	640	Miles.

This undermost Table contains the Denominations and Numbers contained in each other, by which such things are

are measured as have length and breadth, as Board, Glass, Wainscot, Tyling, Pavements, Land, &c.

So in measuring any of these, as Inch, Foot, Yard, and such like, is not only so much in length, but also in breadth too, *viz.* square; but if it lack any thing in breadth, it must be made up in length; so there must be such a number of Inches in a Foot, or Feet in a Yard, &c. as in the Table is expressed. And in measuring thereof the fashion and form must be observed, and accordingly to the length and breadth of the thing, the content must be found, as appears by these Tables following.

A Table
of Board
Measure.

Inches.	Inches.	10 parts.
1	144	0
2	72	0
3	48	0
4	36	0
5	28	8
6	24	0
7	20	6
8	18	0
9	16	0
10	14	4
11	13	1
12	12	0
13	11	1
14	10	3
15	9	6
16	9	0
17	8	5
18	8	0
19	7	6
20	7	2
21	6	8
22	6	5
23	6	3
24	6	0
25	5	8
26	5	5
27	5	3
28	5	1
29	4	9
30	4	8

The Use of the Table.

Find the breadth of the Board in Inches, and with the same enter the first Column of the Table, and in the second Column is the length in Inches, and in the third the 10th part of an Inch that maketh a Foot.

Example.

Suppose a Board be 10 Inches broad, how much thereof in length maketh a Foot? Find 10 in the first Column, and against the same is 14 Inches, 4 10th parts, which is near half an Inch more.

Paving, Painting, Plastering, &c. are measured by the Yard square, being 9 square Feet. The common way is to multiply the length by the breadth in Feet and Inches, the Product

duct thereof divide by 9 for Feet, but by 144 for Inches to bring it into Feet.

Example.

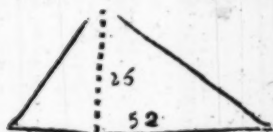
A Court being to be paved, whose length is 16 Feet 4 Inches, and breadth 12 Feet 8 Inches, how many square Yards doth it contain? The length in Inches is 196, the breadth 152, being multiplied, produce 29792 Inches square, which divide by 144, the Quotient will be 206 $\frac{8}{9}$ Feet, which divide again by 9, the Quotient 22 $\frac{8}{9}$ Yards square in the said Court; if there had been 16 Inches more, there would have been just 23 Yards square.

The same Method is to be observed in measuring Land that lyeth square or long, Regular, by working under the Denomination of Rods; and multiplying the length into the breadth, and divide the product by 160 to bring it into Acres; as suppose a Field to contain in length 86 Poles, or Rods, and in breadth 78 Poles, which being multiplied together produceth 6708 Poles, and that being divided by 160 (the number of Poles in an Acre) giveth 41 Acres

Acres and 148 Pole, which is 3 Roods more, (of 40 Pole to the Rood) and 28 Pole remaining, so that if the piece of Land had been 12 Rods more, it would have been full 42 Acres.

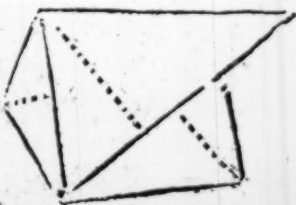
And as for such Land as lyeth in form of a Triangle, whether the sides be equal or not,

draw a Line exactly square from the longest side upright,



unequal, as the dotted Line in the Example, (but if equal, then from any side, square also) then multiply half this dotted Line by the side that it is drawn from, and the product is the number of Rods in such a piece of Land, as suppose the dotted Line contains 26 Rods, and the longest side 52, multiply 52 by 13 (the half of 26) the product is 676, and that divide by 160, giveth 4 Acres 36 Pole over.

Other parcels of Land that have straight sides, may be measured in the same manner, by dividing them in-



to.

to Triangles, as in the last Figure is 3, as appears, and they may be afterwards added together, and so find the content of the whole.

But there are several Books extant that Treat more amply of measuring of Lands, &c. therefore this may suffice in this place, only I shall add a Table relating to the same.

A Table for Measuring of Land, shewing
what number of Poles in length, will make
an Acre of Land at any breadth, from 10
Poles to 70.

P. in l.	P. in b.	Feet.	Inches	P. in l.	P. in b.	Feet.	Inches
10	16	0	0	41	3	14	10
11	14	9	0	42	3	13	4
12	13	5	6	43	3	11	10
13	12	5	0	44	3	10	6
14	11	7	0	45	3	9	2
15	10	11	0	46	3	7	10
16	10	0	0	47	3	6	8
17	9	6	9	48	3	5	6
18	8	14	8	49	3	4	4
19	8	6	11	50	3	3	3
20	8	0	0	51	3	2	3
21	7	10	2	52	3	1	3
22	7	4	6	53	3	0	3
23	6	15	9	54	2	15	10
24	6	11	0	55	2	15	0
25	6	6	7	56	2	14	2
26	6	2	6	57	2	13	4
27	5	15	3	58	2	12	6
28	5	11	9	59	2	11	9
29	5	8	6	60	2	11	0
30	5	5	6	61	2	10	3
31	5	2	7	62	2	9	6
32	5	0	0	63	2	8	10
33	4	14	0	64	2	8	3
34	4	11	7	65	2	7	8
35	4	9	5	66	2	7	0
36	4	7	4	67	2	6	4
37	4	5	4	68	2	5	9
38	4	3	5	69	2	5	3
39	4	1	8	70	2	4	8
40	4	0	0				

The Use of the Table.

This Table consists of 4 Columns, being twice inserted, the first of which is for the length of a piece of Land in Poles, as the Title shews, and the 3 other Columns shew the breadth thereof in Poles, Feet, and Inches, that make an Acre of Land, there be sometimes parts of Inches, which are omitted here.

An Example.

A piece of Land being 18 Pole long, how much in breadth will make an Acre? Find 18 in the first Column, and against it is 8 Pole 14 Feet 8 Inches, and so much in breadth will make an Acre.

So such parcels of Land as lye square, or long, regular, there is no great difficulty in finding the content in this manner, but such as are irregular, are performed with more difficulty.

Something

*Something of Measuring Solid Bodies, as
Timber, Stone, &c.*

It is observable in such things, there must not be respect had only to the length and breadth, but also to the thickness thereof, so that a Foot of Timber is a Foot square every way, and contains 1728 square Inches, being 12 times more than in a Foot of Board; so if it wants either in breadth or thickness, it must be made up in the length.

Now the most usual form that Timber is brought into, before it be used, is a long-square, with equal sides, for the most part; and to find the true content of a piece of squared Timber, multiply the breadth by the thickness in Inches, and the product by the length, which gives the whole content in Inches, which if divided by 1728, the Quotient will shew how many Solid Feet are in the said piece.

An Example.

A piece of Timber 18 Foot long, and 16 Inches square, what is the content in Feet?

Feet? Multiply 16 by 16, the product will be 256, so in 18 Foot is 216 Inches which multiply by the 256, and it produceth 55296 Inches, which 55296 divide by 1728, and the Quotient will be 32, which is the number of Solid Feet in such a piece of Timber.

• *Of Round Timber Measure.*

The old usual way is to gird the piece about with a string, and take the 4th part thereof for the true square, and work as in square Timber; but this way Measures a piece for about a fifth part less than it is; which in large Timber is considerable; for a piece of Timber 38 Inches about, by this Rule, contains 90 Inches in the Basis, which is too little by 24, for according to *H. Phillips's* Method, that is, multiply half the Compass by half the Diameter, and the product is the full extent of such a piece in the Basis, which is 114 Inches, which 114 multiply by the Inches in the length, and the product divide by 1728, gives the total number of Feet, but for its more easie Operation, observe the following Tables in page 199.

Another way to find the content of a Circle, or round piece of Timber, &c. thus,

Multiply the length of the Diameter at the end, by it self, then multiply that product by 11, then the whole divide by 14, and that quotient multiply by the length, gives the content in Inches, which reduce into Feet, as before; but if one end be greater than the other, then after the Diameters at each end be multiplied by themselves, add them together, and take half thereof, and multiply by 11, as before.

To find the content of any small Irregular Body by Water, do thus, Take an upright Vessel, so little as the Body will but easily go into, then fill the Vessel about half full of Water, more or less, as the Body is in bigness, set it upright, and make a mark just at the top of the Water, that done, put in the said Body into the Water all over, and also mark again how high the Water then comes, that being done also, take the Body out of the Water, and take the breadth of the Vessel (if round) in that place, and work, as above, to find the content in Inches, which being multiplied by the number of Inches between the two marks, the product is the number of Inches such a Body contains.

A Ta
wi
Pi
30

Inch. Square.

2 3

1 1

2 2

3 3

1 1

2 2

4 4

1 1

5 5

1 1

2 2

6 6

1 1

2 2

7 7

1 1

8 8

A Table, shewing how much in length will make a Solid Foot of a Square Piece of Timber, from 2 Inches to 30, with half Inches.

Inch. Square.				Inch. Square.				Inch. Square.			
Inch.	Foot.	Inch.	50 Part.	Inch.	Inch.	50 Parts.		Inch.	Inch.	50 Part.	
2	36	0	0	12	12	0		22	3	28	
$2\frac{1}{2}$	28	0	35	$12\frac{1}{2}$	11	3		$22\frac{1}{2}$	3	20	
3	16	0	0	13	10	32		23	3	13	
$3\frac{1}{2}$	11	9	3	$13\frac{1}{2}$	9	25		$23\frac{1}{2}$	3	6	
4	9	0	0	14	8	41		24	3	0	
$4\frac{1}{2}$	7	1	17	$14\frac{1}{2}$	8	11		$24\frac{1}{2}$	2	44	
5	5	9	6	15	7	34		25	2	38	
$5\frac{1}{2}$	4	9	6	$15\frac{1}{2}$	7	9		$25\frac{1}{2}$	2	33	
6	4	0	0	16	6	37		26	2	28	
$6\frac{1}{2}$	3	44	5	$16\frac{1}{2}$	6	17		$26\frac{1}{2}$	2	23	
7	2	11	13	17	5	49		27	2	18	
$7\frac{1}{2}$	2	6	36	$17\frac{1}{2}$	5	35		$27\frac{1}{2}$	2	14	
8	2	3	0	18	5	17		28		10	
$8\frac{1}{2}$	1	11	46	$18\frac{1}{2}$	5	3		$28\frac{1}{2}$	2	6	
9	1	9	17	19	4	40		29	2	2	
$9\frac{1}{2}$	1	7	7	$19\frac{1}{2}$	4	31		$29\frac{1}{2}$	1	49	
10	1	5	14	20	4	17		30	1	46	
$10\frac{1}{2}$	1	3	34	$20\frac{1}{2}$	4	6					
11	1	2	14	21	3	46					
$11\frac{1}{2}$	1	1	3	$21\frac{1}{2}$	3	37					

A Table, shewing how many Inches in length, will make a Foot Solid of a Round piece of Timber, the girt being known from 1 Foot to 6.

Com. Inch.	Inches.	50 Parts.	Com. Inch.	Inches.	50 Parts.	Com. Inch.	Inches.	50 Parts.
12	150	40	33	19	46	54	7	21
13	128	24	34	18	39	55	7	9
14	110	39	35	17	37	56	6	46
15	94	15	36	16	38	57	6	34
16	84	41	37	15	43	58	6	22
17	75	7	38	15	2	59	6	12
18	67	1	39	14	14	60	6	3
19	60	7	40	13	29	61	5	43
20	54	14	41	12	46	62	5	33
21	49	12	42	12	15	63	5	24
22	44	43	43	11	37	64	5	15
23	40	45	44	11	16	65	5	7
24	37	35	45	10	37	66	4	49
25	34	37	46	10	13	67	4	42
26	32	6	47	9	41	68	4	35
27	29	40	48	9	21	69	4	28
28	27	35	49	9	2	70	4	22
29	25	41	50	8	34	71	4	16
30	24	6	51	8	17	72	4	10
31	22	30	52	8	1			
32	21	11	53	7	37			

Of Liquid Measures; and first of Wine.

The usual Measures for Wine (or Spirits) is the Pint, Quart, Pottle, or Gallon, of which are made several other Vessels, as by the Table appears; the Wine Gallon is said to contain 231 solid Inches, being a fifth part less than the Beer Gallon, so that 5 Wine Quarts are equal to 4 Beer or Ale Quarts; this Wine Gallon weigheth about 8 Pound Averdupoiz, but of Oyl (the Measure being near at one) they allow but 7 Pounds Averdupoiz (for that is lighter) to the Gallon. Honey also, being heavier than both, a Gallon thereof weigheth about 12 Pound of the same Measure; by this it appears, that knowing the weight of a Vessel, one may guess at the quantity of Liquids by the weight thereof: Yet I shall give some common Rules (although short) whereby a more exact Knowledge may be attained, which is done by finding the quantity of any Vessel, in Cubick Inches, or how many are contained in any Vessel, which is easily done in any that is of a regular form,

A Table of Dry Measure.

Pints.					
2	Quarts.				
4	2	Pottles.			
8	4	2	Gallons.		
16	8	4	2	Pecks.	
64	32	16	8	4	Bushels.
512	256	128	64	23	8
Quarte.					
5120	2560	1280	640	320	80
Lafts.					

A Table of Wine Measure.

Pints.							
2	Quarts.						
8	4	Gallons.					
144	72	18	Rundlets.				
252	126	31 $\frac{1}{2}$	14 $\frac{1}{2}$	Half Hogsh.			
504	252	63	3 $\frac{1}{2}$	2	Hoghead.		
1008	504	126	7	4	2	Butt or P.	
2016	1008	252	14	8	4	2	Tun.

Of

usual to take the girt in the midst of the piece and work as before, but by this Method (I suppose) the piece will yield less than it ought to do ; although it may hold true in Boards, &c.

Of Dry Measure.

Corn or Grain is measured by this Measure, the least of which is a Pint, and of Wheat should weigh one Pound Troy Weight, or 8 Pounds to the Gallon, but it is now usual to give 7 Pounds Averdupoiz to the Gallon. This Gallon is neither so large as the Beer or Ale Gallon, nor so small as the Wine Gallon, their proportion is said to be to each other, as 28, 33, 35, this Gallon being 272 Cubical Inches, which is 34 to the Pint.

Coals, Fruit, &c. the Peck or Bushel is heaped up, and 36 of which makes a Chaldron of Coals ; and on Ship-board they allow 21 Chaldron to the Score.

The Common Names and Content of the Measures are here inserted in this Table

The Use of the Table of Square Timber Measure.

The number of Inches, (or hal Inches) being known of a square piece of Timber, enter the same in the 1st, or 5th, or 8th Column of the Table, and against it is the Feet, Inches, and 50 parts of an Inch that makes a Foot solid, and being thus taken out of the Table between a pair of Compasses, will readily shew the content of a piece of Timber squared.

The Use of the Table of Round Timber Measure.

Take the compass of a Tree with a string, and find how many Inches it is about, the same number of Inches being found under Com. Inch, and in the following Columns is the Inches, and 50 parts in length that makes a Foot, then with a Rular measure how many times that length is in a piece of Timber, and so many Foot there is of it.

As for such Timber that is taper, or smaller at one end than the other, it is usual

form, as four-square, oblong, &c. by multiplying the length into the breadth, and also into the depth, (as in the example of square Timber) the product of the whole divide by 231 for Wine Gallons, 272 for Grain Gallons, 288 for Ale Gallons; but such sorts of Vessels are not so frequent as Round, and Irregular, therefore these Irregular forms must be reduced to a Regular Proportion, which is done after this manner.

Measure the Diameter of the Vessel, at the Bung, and at the Head, and add the content of each together, which done, take the fourth part thereof, and multiply with half the Compass taken in the midst between the Bung and Head, the product multiply again with the length of the Vessel, gives the content of the same in Inches, (but observe to allow for the thickness of the Heads and Sides) which number of Inches divide by 231 for Wine Measure, the Quotient shews the Gallons in the said Vessel.

As for Example.

Suppose a Vessel have at the Head 22 Inches Diameter, and at the Bung 26, these two numbers added together, make 48 Inches, the Circumference of such a Diameter, (as 7 to 22) is about 76 Inches, the half thereof is 38, and the 4th part of 48 is 12, which 38 and 12 being multiplied, produceth 456, that being multiplied again by the Vessels length, (as suppose 32 Inches) the product will be 14592, then divide that number by 231, and the Quotient will be $63\frac{39}{231}$, which is 63 Gallons and about a sixth part.

But this manner of Operation being a little troublesome, there are Gauging-Rods Invented by Artists, to perform the Work with much more ease and speed.

However, I have here added a Table for Gauging of Wine, according to *H. Phillips*, which is a much shorter way than the former Example, and comes near to it in the truth, the Gallon being divided into a 1000 parts.

Inches of the Diameter.

A Table for Gauging of Wine Vessels.

D	Head.	Bung.	D	Head.	Bung.
	G. Pa.	G. Pa.		G. Pa.	G. Pa.
8	72	154	32	1 160	2 321
9	92	183	33	1 234	2 468
10	113	226	34	1 310	2 620
11	137	274	35	1 388	2 776
12	163	326	36	1 469	2 938
13	192	383	37	1 551	3 102
14	221	444	38	1 636	3 272
15	255	510	39	1 724	3 448
16	290	580	40	1 813	3 625
17	328	657	41	1 904	3 809
18	367	734	42	2 000	4 000
19	409	818	43	2 096	4 191
20	453	906	44	2 194	4 388
21	500	1 000	45	2 295	4 588
22	548	1 097	46	2 398	4 796
23	600	1 199	47	2 504	5 007
24	653	1 305	48	2 611	5 222
25	708	1 416	49	2 721	5 442
26	766	1 502	50	2 833	5 665
27	816	1 692	51	2 948	5 895
28	888	1 777	52	3 065	6 129
29	953	1 906	53	3 184	6 367
30	1 020	2 40	54	3 305	6 609
31	1 089	2 177			

Inches of the Diameter.

Inches of the Diameter.

The Use of the Table.

First measure the breadth at the Head of the Vessel in Inches, which find in the first Column, and against it under Head, is a number of Gallons or Parts; so likewise find the breadth in Inches at the Bung, which also find in the first Column, and against it under Bung, is the Gallons or Parts, which two Parts must be added together, then multiply the same by the length of the Vessel, and from the product cut off Figures toward the Right Hand, and those are Parts, but them on the Left Hand are Gallons.

Example.

A Vessel having 19 Inches at the Head, and 21 at the Bung, the length 24, what is the content?

The Table shews that,
 For 19 Inches at the Head 409
 For 21 Inches at the Bung 1000 } parts
 These two being added }
 together, makes } 1409
 Which multiply by the } 24
 length 24, }
 Produceth 33 Gal. 816 P. 33 | 816

Of Beer or Ale Measure.

The Operation is near the same as of Wine Measure, but there is 288 Cubick Inches in a Beer or Ale Gallon, and 6 Gallons in a Cubick Foot; these sorts of Cubical Bodies being so extensive, which seems almost incredible, for a Tun of 2 Yards square will contain 8 square Yards, 216 square Feet, 373248 square Inches; and in Measures, 40½ Barrels of Ale, 36 Barrels of Beer, 1296 Gallons; in Grain 171½ Bushels, or 1372 Gallons: Now Beer and Ale is usually sold by Barrels, Kilderkins and Firkins, the content of each, these Tables declare.

L 3

A

A Table of Beer Measure.

Pints.

2 Quarts.

8 4 Gallons.

72 36 9 Firkins.

144 72 18 2 Kilderkins.

288 144 36 4 2 Barrels.

A Table of Ale Measure.

Pints.

4 Quarts.

8 4 Gallons.

64 32 8 Firkins.

128 64 16 2 Kilderkins.

256 128 32 4 2 Barrels.

A Table to be used with a Gauging-Rod, for
Beer or Wine Vessels.

Wine.			Beer.			Wine.			Beer.		
In.	Pa.	Gall.	In.	Pa.		In.	Pa.	Gall.	In.	Pa.	
7	4	1	7	9		22	10	31	24	3	
9	1	2	9	10		22	14	32	24	7	
10	6	3	11	0		23	2	33	24	11	
11	7	4	12	3		23	6	34	24	15	
12	6	5	13	2		23	10	35	25	3	
13	1	6	13	15		23	13	35	25	7	
13	12	7	14	10		24	0	37	25	11	
14	6	8	15	5		24	3	38	25	15	
15	15	9	15	15		24	6	39	26	2	
15	7	10	16	9		24	9	40	26	5	
16	0	11	17	2		24	12	41	26	8	
16	7	12	17	11		24	15	42	26	11	
16	15	13	18	1		25	2	43	26	14	
17	6	14	18	9		25	5	44	27	1	
17	13	15	18	15		25	8	45	27	4	
18	3	16	19	5		25	11	46	27	7	
18	9	17	19	11		25	14	47	27	10	
18	14	18	20	1		26	1	48	27	13	
19	3	19	20	7		26	4	49	28	0	
19	8	20	20	13		26	7	50	28	3	
19	13	21	21	2		26	10	51	28	6	
20	2	22	21	7		26	13	52	28	9	
20	7	23	21	12		27	0	53	28	12	
20	12	24	22	1		27	3	54	28	15	
21	1	25	22	6		27	6	55	29	2	
21	6	26	22	11		27	9	56	29	5	
21	10	27	23	0		27	11	57	29	8	
21	14	28	23	5		27	13	58	29	11	
22	2	29	23	10		27	15	59	29	14	
22	6	30	23	15		28	1	60	30	0	

The Use of the Table.

First, take a small Rod about 3 Foot long, divided into Inches, and every Inch into 16 parts; then to know the content of any Ale or Wine Vessel, made after the usual form, not exceeding 60 Gallons, take this Rod, and put that end with the least number of Inches into the Bung of the Vessel, to the bottom at either end, then hold the upper end of the Rod as near the middle of the Bung as may be, then observe the number of Inches, and parts of the Rod, that reaches just up to the inside of the Bung, and the same number being found in this Table under Inch Beer, for Beer Measure, or under Inch Wine, for Wine Measure, and the number of Gallons is in the midst against the number of Inches and Parts.

But if the Bung should not be exactly in the middle, then Gauge both ends, and so find out the true Point.

This way is easie, and ready, and in small Vessels almost exact.

Soap,

Soap, and Butter, the Barrel is the same as for Ale ; a Firkin of Soap should contain 66 Pound, and of Butter 56 Pound.

Something about the Tale of Goods.

Canvas Cloth, 120 Ells to an Hundred.

Fish, as Ling, Cod, Haberdine, 124 to an Hundred. Stockfish, Herring, 120 to the Hundred, 1200 to the Thousand, or Ale Barrel, 12 Barrels make a Last. Eells 25 to a Strike, 10 Strike to the Bind.

Leather, 10 Hides make a Dicker, 200 Hides, or 20 Dicker, make a Last. Goats-skins, 50 make a Kipp, Calves-skins, 12 to the Dozen, being Tanned. Coney, Kid, Lamb, Budge, &c. have 100 to the Hundred.

Laths of 5 Foot long have 100 to the Hundred, but 4 Foot long have 120 to the Hundred, or Bundle.

Of Deals, Nails, Eggs, &c. have 120 to the Hundred.

Fruit, as Apples, Pears, &c. have 105 to the Hundred.

L. 5

Iron,

Iron, Tin, Copper, &c. have 112 Pound to the Hundred.

Lead, 19 Hundred and a half make a Fother.

Paper, 24 Sheets make a Quire, in *Genova* Paper 25:

20 Quire make a Ream, 10 Ream a Bale.

Parchment, 12 Skins to the Dozen, 5 Dozen make a Roll.

Glass, 5 Foot make a Table, 45 Tables a Case, *Newcastle, Normandy* Glass, 25 Tables is a Case, Glass Bottles, 21 to the Dozen, 12 Dozen make a Gross, which is 252.

Hoops are sold by the Bundle, as Pipe-hoops 70, Hoghead 90, Barrel or Kilderkin 120, Firkin 180, in a Bundle.

Last of Pitch, Tar, or Ashes, 14 Barrels.

Last of Osmonds, or Iron-Stone, 4000 Weight.

A Stone of Wire is 10 Pounds.

A N

Arithmetical TABLE :

O R,

A Table of Arithmetical
Proportions.

By which is performed divers small Questions in Arithmetick, as Multiplication, Division, Reduction, and also the Rule of Three, called the Golden Rule, which is very Excellent, but somewhat difficult, because it cannot be performed without the help of Multiplication and Division, but by this Table it is done without Pen or Pencil, being fitted for the Understanding and Use of the Ignorant, as well as the Skilful, being also easie, ready, pleasant, and necessary.

An Arithmetical Table.

	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100
11	22	33	44	55	66	77	88	99	110
12	24	36	48	60	72	84	96	108	120
13	26	39	52	65	78	91	104	117	130
14	28	42	56	70	84	98	112	126	140
15	30	45	60	75	90	105	120	135	150
16	32	48	64	80	96	112	128	144	160
17	34	51	68	85	102	119	136	153	170
18	36	54	72	90	108	126	144	162	180
19	38	57	76	95	114	133	152	171	190
20	40	60	80	100	120	140	160	180	200
21	42	63	84	105	126	147	168	189	210
22	44	66	88	110	132	154	176	198	220
23	46	69	92	115	138	161	184	207	230
24	48	72	96	120	144	168	192	216	240
25	50	75	100	125	150	175	200	225	250
26	52	78	104	130	156	182	208	234	260
27	54	81	108	135	162	189	216	243	270
28	56	84	112	140	168	196	224	252	280
29	58	87	116	145	174	203	232	261	290
30	60	90	120	150	180	210	240	270	300

An Arithmetical Table.

	11	12	13	14	15	16	17
1	11	12	13	14	15	16	17
2	22	24	26	28	30	32	34
3	33	36	39	42	45	48	51
4	44	48	52	56	60	64	68
5	55	60	65	70	75	80	85
6	66	72	78	84	90	96	102
7	77	84	91	98	105	112	119
8	88	96	104	112	120	128	136
9	99	108	117	126	135	144	153
10	110	120	130	140	150	160	170
11	121	132	143	154	165	176	187
12	132	144	156	168	180	192	204
13	143	156	169	182	195	208	221
14	154	168	182	196	210	224	238
15	165	180	195	210	225	240	255
16	176	192	208	224	240	256	272
17	187	204	221	238	255	272	289
18	198	216	234	252	270	288	306
19	209	228	247	266	285	304	323
20	220	240	260	280	300	320	340
21	231	252	273	294	315	336	357
22	242	264	286	308	330	352	374
23	253	276	299	322	345	368	391
24	264	288	312	336	360	384	408
25	275	300	325	350	375	400	425
26	286	312	338	364	390	416	442
27	297	324	351	378	405	432	459
28	308	336	364	392	420	448	476
29	319	348	377	406	435	464	493
30	330	360	390	420	450	480	510

An Arithmetical Table.

	18	19	20	21	22	23	24
1	18	19	20	21	22	23	24
2	36	38	40	42	44	46	48
3	54	57	60	63	66	69	72
4	72	76	80	84	88	92	96
5	90	95	100	105	110	115	120
6	108	114	120	126	132	138	144
7	126	133	140	147	154	161	168
8	144	152	160	168	176	184	192
9	162	171	180	189	198	207	216
10	180	190	200	210	220	230	240
11	198	209	220	231	242	253	264
12	216	228	240	252	264	276	288
13	234	247	260	273	286	299	312
14	252	266	280	294	308	322	336
15	270	285	300	315	330	345	360
16	288	304	320	336	352	368	384
17	306	323	340	357	374	391	408
18	324	342	360	378	396	414	432
19	342	361	380	399	418	437	456
20	360	380	400	420	440	460	480
21	378	399	420	441	462	483	504
22	396	418	440	462	484	506	528
23	414	437	460	483	506	529	552
24	432	456	480	504	528	552	576
25	450	475	500	525	550	575	600
26	468	494	520	546	572	598	624
27	486	513	540	567	594	621	648
28	504	532	560	588	616	644	672
29	522	551	580	609	638	667	696
30	540	570	600	630	660	690	720

An Arithmetical Table.

	25	26	27	28	29	30	31
1	25	26	27	28	29	30	31
2	50	52	54	56	58	60	62
3	75	78	81	84	87	90	93
4	100	104	108	112	116	120	124
5	125	130	135	140	145	150	155
6	150	156	162	168	174	180	186
7	175	182	189	196	203	210	217
8	200	208	216	224	232	240	248
9	225	234	243	252	261	270	279
10	250	260	270	280	290	300	310
11	275	286	297	308	319	330	341
12	300	312	324	336	348	360	372
13	325	338	351	364	377	390	403
14	350	364	378	392	406	420	434
15	375	390	405	420	435	450	465
16	400	416	432	448	464	480	496
17	425	442	459	476	493	510	527
18	450	468	486	504	522	540	558
19	475	494	513	532	551	570	589
20	500	520	540	560	580	600	620
21	525	546	567	588	609	630	651
22	550	572	594	616	638	660	682
23	575	598	621	644	667	690	713
24	600	624	648	672	696	720	744
25	625	640	675	700	725	750	775
26	650	676	702	728	754	780	806
27	675	702	729	756	783	810	837
28	700	728	756	784	812	840	868
29	725	754	783	812	841	870	899
30	750	780	810	840	870	900	930

An Arithmetical Table.

	32	33	34	35	36	37
1	32	33	34	35	36	37
2	64	66	68	70	72	74
3	96	99	102	105	108	111
4	128	132	136	140	144	148
5	160	165	170	175	180	185
6	192	198	204	210	216	222
7	224	231	238	245	252	259
8	256	264	272	280	288	296
9	288	297	306	315	324	333
10	320	330	340	350	360	370
11	352	363	374	385	396	407
12	384	396	408	420	432	444
13	416	429	442	455	468	481
14	448	462	476	490	504	518
15	480	495	510	525	540	555
16	512	528	544	560	576	592
17	544	561	578	595	612	629
18	576	594	612	630	648	666
19	608	627	646	665	684	703
20	640	660	680	700	720	740
21	672	693	714	735	756	777
22	714	726	748	770	792	814
23	746	759	782	805	828	851
24	778	792	816	840	864	888
25	800	825	850	875	900	925
26	832	858	884	910	936	962
27	864	891	918	945	972	999
28	896	924	952	980	1008	1036
29	928	957	986	1015	1044	1073
30	960	990	1020	1050	1080	1100

An Arithmetical Table .

	38	39	40	41	42	43
1	38	39	40	41	42	43
2	76	78	80	82	84	86
3	114	117	120	123	126	129
4	152	156	160	164	168	172
5	190	195	200	205	210	215
6	228	234	240	246	252	258
7	266	273	280	287	294	301
8	304	312	320	328	336	344
9	342	351	360	369	378	387
10	380	390	400	410	420	430
11	418	429	440	451	462	473
12	456	468	480	492	504	516
13	494	507	520	533	546	559
14	532	546	560	574	588	602
15	570	585	600	615	630	645
16	608	624	640	656	672	688
17	646	663	680	697	714	731
18	684	702	720	738	756	774
19	722	741	760	779	798	817
20	760	780	800	820	840	860
21	798	819	840	861	882	903
22	836	858	880	902	924	946
23	874	897	920	943	966	989
24	912	936	960	984	1008	1032
25	950	975	1000	1025	1050	1075
26	988	1014	1040	1066	1092	1118
27	1026	1053	1080	1107	1134	1161
28	1064	1092	1120	1148	1176	1204
29	1102	1131	1160	1189	1218	1247
30	1140	1170	1200	1230	1260	1290

An Arithmetical Table.

	44	45	46	47	48	49	50
1	44	45	46	47	48	49	50
2	88	90	92	94	96	98	100
3	132	135	138	141	144	147	150
4	176	180	184	188	192	196	200
5	220	225	230	235	240	245	250
6	264	270	276	282	288	294	300
7	308	315	322	329	336	343	350
8	352	360	368	376	384	392	400
9	396	405	414	423	432	441	450
10	440	450	460	470	480	490	500
11	484	495	506	517	528	539	550
12	528	540	552	564	576	588	600
13	572	585	598	611	624	637	650
14	616	630	644	658	672	686	700
15	660	675	690	705	720	735	750
16	704	720	736	752	768	784	800
17	748	765	782	799	816	833	850
18	792	810	828	846	864	882	900
19	836	855	874	893	912	931	950
20	880	900	920	940	960	980	1000
21	924	945	966	987	1008	1029	1050
22	968	990	1012	1034	1056	1078	1100
23	1012	1035	1058	1081	1104	1127	1150
24	1056	1080	1104	1128	1152	1176	1200
25	1100	1125	1150	1175	1200	1225	1250
26	1144	1170	1196	1222	1248	1274	1300
27	1188	1215	1242	1269	1296	1323	1350
28	1232	1260	1288	1316	1344	1372	1400
29	1276	1305	1334	1363	1392	1421	1450
30	1320	1350	1380	1410	1430	1470	1500

An

An Arithmetical Table.

	51	52	53	54	55	56
1	51	52	53	54	55	56
2	102	104	106	108	110	112
3	153	156	159	162	165	168
4	204	208	212	216	220	224
5	255	260	265	270	275	280
6	306	312	318	324	330	336
7	357	364	371	378	385	392
8	408	416	424	432	440	448
9	459	468	477	486	495	504
10	510	520	530	540	550	560
11	561	572	583	594	605	616
12	612	624	636	648	660	672
13	663	676	689	702	715	728
14	714	728	742	756	770	784
15	765	780	795	810	825	840
16	816	832	848	864	880	896
17	867	884	901	918	935	952
18	918	936	954	972	990	1008
19	969	988	1007	1026	1045	1064
20	1020	1040	1060	1080	1100	1110
21	1071	1092	1113	1134	1155	1176
22	1122	1144	1166	1188	1210	1232
23	1173	1196	1219	1242	1265	1288
24	1224	1248	1272	1296	1320	1344
25	1275	1300	1325	1350	1375	1400
26	1326	1352	1378	1404	1430	1456
27	1377	1404	1431	1458	1485	1512
28	1428	1456	1484	1512	1540	1568
29	1479	1508	1537	1566	1595	1624
30	1530	1560	1590	1620	1650	1680

Ex-

Explanation.

This Table consists of Eight Pages, every Page is divided into several Columns, and in the first Column of every Page, (beginning with 1, and ending with 30) is to be sought the number of Yards, Ells, Inches, Feet, Poles, &c. or Pints, Quarts, Gallons, &c. or Ounces, Pounds, Hundreds, &c. so to be taken under any Denomination, as the Matter requires.

And at the top of every Column, throughout the Eight Pages, stands the Value of one Yard, Pound, Quart, &c. either beginning at 2, and ending at 56, but might be in Farthings, Pence, Shillings, Crowns, Pounds, &c. Enlarged much with Time, and Place, upon occasion; and to make this appear the more plain and easie to the meanest Capacity, I shall give several Examples.

As first in Multiplication, multiply 37 by 15, look 37 at the top, and 15 in the first Column on the Left Hand, and in a direct Line from 15, under 37 is 555, the Answer. Again, Suppose

25 Men get 19 Pence a-piece in one Day, how many Pence do all get? Look 25 in the first Column, and against it, under 19, is 475, the Answer.

If 1 Yard Cost 9 Pence, what Cost 24 Yards? Look under 9, and against 24, is 216 Pence, the Answer.

If there be 12 Pence in 1 Shilling, how many Pence is there in 28 Shillings? Look under 12, and against 28 is 336 Pence.

If 3 Feet be in 1 Yard, how many Feet in 17 Yards? Look 3 at top, and against 17 is 51 Feet.

If 1 Pound be 16 Ounces, how many Ounces be 30 Pound? Look 16 at top, and against 30 is 480.

In Division.

Divide 243 by 9; look 243 under 9, and against it is 27, the Quotient; or there is 27 times 9 contained in 243. In 1268, how many times 47? Look under 47, and that number is not to be found, but 1269 being 1 more, therefore against 26 is 1222; so there is

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(246)

26 times 47 contained in 1298, and 46 remains; so at any time when the number is not to be found, look the number next less than the number proposed, and against it is the Answer, and the remainder is easily known, by subtracting the number found from the Dividend or Number proposed, as afore, subtract 1222 from 1268, remains 46.

Suppose 1161 Pounds to be divided among 43 Men, I demand each Man's share; look under 43, and against 1161 is 27, which shews 27 Pounds to be each Man's share.

If 43 Men get 645 Pence in one Day, what gets 1 Man? Look under 43, and against 645 is 15 Pence for 1 Man's getting.

In 696 Hours, how many Days? Look under 24 (the number of Hours in one Day) for 696, and against it is 29, the number of Days in so many Hours.

In 224 Pints, how many Gallons? Look under 8, (the number of Pints in 1 Gallon) for 224, and against it is 28, for the Answer.

In

In 1200 Pole, how many Furlongs?
Look under 40, (the number of Poles
in 1 Furlong) for 1200, and against
it is 30 Furlong, for the Answer.

Reduction is wrought by multiplication and Division, for it teacheth to bring all great Denominations into small, and small into great.

As Pounds multiplied by 20 are Shillings.

Shillings multiplied by 12 are Pence.

Pounds multiplied by 240 are Pence.

Shillings multiplied by 48 are Farthings.

Contrariwise.

Shillings divided by 20 are Pounds.

Pence divided by 12 are Shillings.

Pence divided by 240 are Pounds.

Farthings divided by 48 are Shillings.

Questions in the Rule of Three.

If 6 Yards of Cloth cost 30 Shillings,
what cost 25 Yards at the same Rate?
Find 6 in the first Column, so look
straight towards the Right Hand for
30, (which is under the Column of 5)
the

then look 25 in the first Column, and against it is 125 in the said Column of 5, which intimates, that 25 Yards will cost 125 Shillings.

If 13 Shillings contains 156 Pence, how many Shillings is in 324? Look under 12 (the number of Pence in one Shilling) for 324 and against it is 27, which is the number required.

If 9 Pounds of Tobacco cost 14 Shillings, what cost 22 Pounds after the same Rate?

This Question, and all such that are put in this manner, are performed with more difficulty than those going before, for there must be two Inspections to Answer it; therefore observe, the middle number must be multiplied by the last, and the product thereof divided by the first; as find 14 at top, and 22 in the same page at the Left Hand, and in the Common Angle is 308, which is Shillings, then turn to 9 at top, and seek for 308 under it, but those numbers are not extended so large, therefore find 9 at the side, and from that toward the Right Hand is 306, the nearest number to it, and 34 at top, which is the Answer of the Question,

tion, only there is 2 remaining, which is a Fraction, $\frac{2}{9}$, and somewhat more than 2d. 2q. so that 22 pounds after the Rate aforesaid, comes to 1 pound, 14 Shillings, 2 Pence, Halfpenny, which is as exact as need requireth, in such a small Sum.

If 8 Men will be 15 Days in doing a piece of Work, how many Days will 12 Men do the same Work in? Find 8 in the first Column, and against it, under 15, is 120, then find 120 under 12, and against it is 10 Days, for 12 Men to do the same Work in; so contrariwise, if 12 Men can dig 20 Rood of Land in 10 Days, how many Men can dig the same in 15 Days? Find 12 in the first Column, and against it, under 10, is 120; look 120 under 15, and against it is 8 Men, which may serve as a proof for the true operation of the first Question.

Suppose a Man have owing of him 42 pounds, and his Debtor being unable to pay him the whole, agrees with him to pay him 13 Shillings in the pound, how much must the Creditor Receive according to Agreement? Find 42 at top, and under it, against 13, is

546 s. which being reduced into pounds, by finding the nearest number to it lels, under 20, which is 540, and against it is 27, and 6 there being more, which is 6 Shillings, so 27 l. 6 s. was the Agreement between them.

Suppose 3 Men should jointly adventure together 200 Pound, and in Trading should Gain 78 Pound ; now to find each Man's part, look under 3 for 78, and against it is 26 Pound for each Man.

Again, Suppose 4 Merchants should adventure together 400 Pound, the first put in 84 Pound, the second 96 Pound, the third 104, the fourth 116 Pound, and the whole Gain was a 100 Pound ; *Query*, What is each Man's share? Turn to 4 at top. and unto it, first, find 84 against it is 21 Pounds, the first Man's part ; then find 96, against it is 24 Pound, the second Man's part ; then find 104, and against it is 26 for the third Man's part ; lastly, find 116, against which is 29, the last Man's part.

Note also, if thou reckon the single Figures at the top of the Table, to stand for 20, 30, 40, &c. to a Hundred,

dred, or upwards, far larger Questions may be Answered, by only adding the Cyphers at last to them; as thus, 13 times 16 is 208, but 13 times 160 is 2080, or 130 times 160 is 20800.

Suppose 4500 Bricks will make a square Rod of a Wall, at a Brick and an half thick, and I have a Court to be walled about, whose Compass is 180 Rods, the height of whose Wall is designed half a Rod; *Query*, How many Rods are in the said Wall, and also the number of Bricks to Build the same? First, divide 180 by 2, (because 2 half Rods in length make but 1 square Rod) which by the Table cannot be, then divide 18 by 2, the Quotient is 9, to which add a Cypher, and that makes 90, the number of Rods in the whole Wall, then say, if 1 Rod contain 4500 Bricks, how many do 90 Rods contain? Indeed these numbers are not to be found in the Table, therefore find 9 at the side, and 45 at the top, and in the Angle of meeting is 405, to which add the 2 Cyphers belonging to 45, and the 1 Cypher belonging to 9, which makes all together 405000, it being the number of Bricks required to Build the whole Wall.

So this Method being observed for any other Question, where Tens, Hundreds, &c. is required, these Tables will serve for much greater numbers than therein is simply expressed, by adding the Cyphers at last.

How to take the Height of a Tree, House, Steeple, or such-like, that standeth upright, by the Shadow thereof, speedily.

Take a straight Staff of about 3 or 4 Foot in length, more or less, divided into Feet, (or half Feet, which may do better) then when the Sun is somewhat high above the Horizon, and shineth shadow, set the Staff upright in a plain level place, and mark where the end of the shadow falleth, and note how many parts of the Staff it contains, then measure the length of the shadow of the Tree, Turret, &c. with the Staff, from the Basis, or Foundation, that is perpendicular from the place that casteth shadow ; and note also the number of parts it contains, (always observing the shadow on the Ground to be level) then multiply the length of the shadow by the length of the Staff, the product

product thereof divide by the length of the shadow of the Staff, and the Quotient proportionably will shew the height of the place.

An Example.

Suppose the Staff be 4 Foot long, and divided into 8 parts, or half Feet, and being set upright, the shadow thereof is 6 parts, and the shadow of the Turret 54 parts, which 54 multiply by 8, the Staffs length, gives 432, and 432 being divided by 6, (the number of parts the shadow of the Staff contains) and the Quotient is 74 parts, or half Feet, which is 36 Feet, for the height of the place.

So many other necessary Questions may be answered by these Tables of several sorts, which by these Examples the Ingenious may further improve.

Something of Offices and Conditions of Men mentioned in the Scripture.

Patriarchs, Fathers of Families, as Abraham, Isaac, Jacob, and his Sons:

Judges, Such as were appointed for a
M 3. time,

time, immediately by God, Chief over the Children of *Israel*; also such as determined Controversies in particular Cities.

Elders, Senators, the 70, or Sanedrin, *Numb.* 11. 16.

Officers, Provests, Sheriffs, or Executioners.

Israelites, Hebrews, descending from *Jacob*.

Hebrews, the Posterity of *Heber*.

A *Profelyte* of the Covenant, who was Circumcised and submitted to the whole Law.

A *Profelyte of the Gate*, or Stranger, who worshipped one God, but was not Circumcised.

Heads of the Captivity, the Chief of each Tribe or Family.

Presidents, or Governors, sent from *Rome* with Imperial Power.

Tetrarchs, Governors, or Kings over a fourth part.

Proconsuls, Deputy Consuls.

Consuls, Chief Governors, two Chosen yearly at *Rome*.

Publican, a Farmer of Publick Rents, or Tax-gatherer.

Centurion, Captain of a Hundred of Men.

High-priest, who only might enter into the Holy of Holies once a Year.

Second Priest, to supply the High-priest's place, if disabled.

Priests, Levites of the Sons of *Aaron*, divided into 24 Ranks, each serving Weekly in the Temple.

Levites, of the Tribe of *Levi*, excluding *Aaron's* Stock, namely, *Gershonites*, *Cohabites*, and *Merarites*.

Nethinims, Hewers of Wood, and Drawers of Water for the *Levites*, but not of their Stock.

Prophets, called *Seers*, who foretold future Events, and denounced God's Judgments.

Chemarims, *Zeph. 1. 4.* Black-coats.

Children of the Prophets, their Disciples or Scholars.

Scribes, Writers, and Expounders of the Law.

Wise Men, so call'd, in imitation of the Eastern *Magi*, or *Gentile* Philosophers.

Rabbies, or Doctors, Teachers among the *Jews*.

Libertines, Freemen of Rome, whether Jews or *Profelytes*.

Gaulonites, who pretended it Unlawful to obey a Heathen Magistrate.

Herodians, Time-servers, and Flatterers of Herod.

Epicureans, who placed all Happiness in Pleasures.

Stoicks, Disciples of Zeno, who held a Fatal Necessity.

Nicholaitans, Disciples of Nicholas, one of the Seven Deacons, who held their Wives in Common.

Nazarites, who under a Vow abstain from Wine, &c. Numb. 6.

Nazarene, one of Nazareth, or a Jew professing Christianity.

Zealots, who under pretence of Law, thought themselves Authorized to commit any Outrage.

Pharisees, Jewish Separatists, pretending great Holiness.

Sadducees, a Jewish Sect, who denied the Resurrection.

Samaritans, People of Samaria, partly Jews, and partly Heathens.

Apostles, Missionaries, they who were sent by Christ, were called the Twelve.

Disciples,

Disciples, Followers or Learners of a Leader.

Bishops, Presbyters or Overseers, Successors of the Apostles in Church Affairs.

Deacons, Seven, Chosen by the Apostles to take Care of the Poor.

Many Names were given to People in Scripture, according to the Name of the Place of their Habitation, as *Egyptians* People of *Egypt*, *Romans* the People of *Rome*, &c. and also from their Predecessors, as *Canaan* (the Son of *Ham*) the Father of the *Canaanites*, the *Moabites* from *Moab* the Son of *Lot*, &c. which Names are easie to be understood, for divers of the like nature are found in the Scriptures.

An Alphabetical Catalogue of the most noted Places mentioned in the Holy Scriptures, viz. the Old and New Testaments; as also the Apocrypha, with their supposed distance from Jerusalem in English Miles, and what Point from thence they are inclining, that City being the most Eminent Place, and said to lye in the Latitude of 31 Degrees, 55 Minutes North, and Longitude 66 Degrees, being distant from London about 2352 Miles, Point bearing South-East by East; being gathered out of a Book called, Itinerarium Totus Sacrae Scripturae. Collected out of H. Bunting's Works.

A.			Enon	42	n.
Abarim, moun.			Ethiopia, cou.	800	f.
Abelaim, p.	32	e.	Ezion gaber	174	f.
Abel meholi	38	n.	Ajilon	4	f. e.
Achor Val.	12	n.	Ai, c.	8	n.
Acra, moun. in			Alexandria, c.	288	w.
Ferusalem	0	e.	Almon Dibra		w.
Adolus	16	n.w.	thaim, p.	40	e.
Ador, cit.	48	f. w.	Amphipolis, c.	960	n.w.
Atorfa	12	n.w.	Antiochia, c.	280	n.
Adumim	12	e.	Antipatris, c.	12	n.w.
Ader, tower	7	f.	Ange, moun.	20	n.

Spainca.

Apamea	208	n.	Bethsaliza, c.	8	n.w.
Aphec	44	n.	Bethsan, c.	44	n.
Arimathea, c.	16	n.w.	Bethseles, c.	4	w.
Apolonia	948	n.w.	Bethsura, cast.	0	f.
Arar, c.	24	n. e.	Bethulia, c.	44	n.
Arbela	96	n.	Bethjesimoth, c.	20	
Arabia, coun.	40	f.	Bethbaalmeon, c.	24	e.
Arnon, Ri.	20	e.	Beerzaba, t.	40	f. w.
Aroer, c.	24	e.	Berea, c.	960	n.w.
Arbona, p.	140	f.	Bethsech, c.	44	n.
Ararat, mount.	600	n.	Bethsaida, t.	56	n.
Arad	22	f.	Bethbesan, t.	12	n. e.
Arabatb	40	n.	Benei Faachon,	96	f.
Asdod	22	w.	Bezra, t.	10	w.
Ascalon	30	w.	Besetha, mount.		n.
Afferemoth	16	w.	Bythania, co.		n.w.
Astaroth	56	l. e.	Butz, c.	20	f. e.
Affyria			Bythron	82	n.w.
Athens, c.	720	l.w.	C.		
Attalia	832	n.	Caphibor, c.	600	n.
Azece	8	w.	Casareo (strat. c.)	32	n.
B.			Carchemes, c.	400	n.
Babylon, c.	680	e.	Cades Bernea, c.	40	f.
Bailhazor	8	n. e.	Casarea Phil.	104	n.
Baalzephon, Id.	160	f.	Carer		
Balub	12	n.w.	Capher Salama.	12	n.
Baburim	1	n. e.	Carmell, c.	12	f. w.
Baschamah	52	n. e.	Caspina, a Land	680	e.
Bazra	20	n. e.	Caspin, t.	16	n.w.
Berothai, t.	208	n.	Cana, c. in Gal.	68	n.
Bethel, Bethavai	8	n.	Capernaum, t.	56	n.
Bethabara, t.	16	e.	Calvari, moun.		w.
Bethaniz, t.	1	n. e.	Cedron, Ke. ri.		f.
Bethoron, t. inf	8	n. e.	Chebar, Ri.	600	e.
Bethlem Ephr. t.	6	f.	Chazor, t.	8	n.
Bethpage, t.	1	e.	Che-elab, p.	92	f.

<i>Chasmona</i> , p.	40	f.	<i>Eleutherius</i> , Ri.	200	n.
<i>Chezbon</i> , c. p.	36	e.	<i>Ephesus</i> , c.	544	n.w.
<i>Chorazin</i> , c.	16	n.	<i>Ephraim</i> , mo.	8	f.
<i>Cbius</i> , an Isle.	600	n.w.	<i>Estael</i> , t.	20	w.
<i>Claudia</i> , Isle.	588	w.	<i>Esdrelon</i> , a Pla.	52	n.
<i>Corinthia</i> , c.	760	w.	<i>Euxine Sea</i>	600	n.
<i>Collossa</i> in Pbr.	520	n.w.	<i>Euphrates</i> . R. h.	300	n.
<i>Cyprus</i> , an Isle.	160	n.	<i>Ephron</i>	44	
<i>Cilicia</i> , c.	304	n.	<i>Elah</i> , t.	160	f.
<i>Creer</i> , Isle Ca.	600	w.	<i>Eta</i> , a Rock.	12	w.
<i>Cyrene</i> or <i>Kyr</i> .	816	w.	<i>Edrie</i> , c.		
D.				32	f. e.
<i>Damascus</i> , c.	160	n. e.	G.		
<i>Decapolis</i> , cou.	50	n. e.	<i>Gadara</i> , c.	48	n.
<i>Debir</i> , c.	22	f.	<i>Galatia</i> , coun.	400	n.
<i>Derbe</i> , c.	388	n.	<i>Galilee</i> , coun.	50	w.
<i>Dedan</i> , c.		f.	<i>Gath</i>	34	n.
<i>Dibon</i> , c.	28	n. e.	<i>Gath Hopher</i> , t.	60	n.
<i>Diblathim</i> , c.	80	n.	<i>Gaza</i> , c.	44	f. w.
<i>Dimon</i> , c.	28	n. e.	<i>Gazer</i>	16	f. w.
<i>Dibon Gad</i> , p.	52	n. e.	<i>Geba</i> , a Hi. & t.	1	w.
<i>Doch</i> , Castle.	10	n. e.	<i>Gebal</i> , c.	160	n.
<i>Dora</i>	48	n.	<i>Genezereth</i> , La	44	n.
<i>Dotham</i>	44	n.	<i>Gerar</i> , t.	30	f. w.
<i>Duma</i> , c.	80	f. w.	<i>Gesem</i> or <i>Gosen</i>	174	f. w.
E.			<i>Gesur</i> , coun.	88	n. e.
<i>Ecron</i> , c.	16	w.	<i>Gibeon</i> , <i>Gibe</i> . c.	4	n.
<i>Eglon</i> , c.	12	f.	<i>Gibon</i> , Hill.	0	w.*
<i>Egbarhana</i> , c.	136	n. e.	<i>Gilead</i> , coun.	60	e.
<i>Eden</i> , c.	400	n. e.	<i>Gilgal</i> , t.	12	n. e.
<i>Edom</i> , or <i>Esm.</i>	40	f.	<i>Geisamene</i> Vi.	1	
<i>Elam</i> , or <i>Pe. co.</i>		e.	<i>Gerizim</i> , mou.	8	f. e.
<i>Elim</i> , p.	120	f. e.	<i>Gilboa</i> , mount.	40	n.
<i>Emaus</i> , t.	8	n.	<i>Goren Atad</i> , t.	16	f. e.
<i>Endor</i> , t.	44	n.	<i>Graves of Lu</i> , p	112	f.
<i>Engedi</i> , t.	6	n. e.	<i>Enidus</i> , t.	492	n. w.

Gibibon,

Gibibon, c.	16	w.	Jabza, p.	24	e.
H.			Jazir, p.	36	e.
Harán, or Ch. c.	440	n. e.	Jura, coun.	43	n.
Hemath	100	n.	K.		
Harada, p.	80	f. e.	Karkor, c.	40	n. e.
Hay as Ai.	8	n.	Keder, Sur, De.	80	f. w.
Hazereth, p.	32	f.	Kegilab, c.	20	f. w.
Hexezen Tha.	20	n. e.	Kereth, Ri.	8	n.
Hazor, c.	80	n.	Kiriath-jearim	1	w.
Hebron, c.	22	f. w.	Kiriathauan, c.	32	e.
Heliopolis, c.	224	f. w.	Kir, or Cyrene	816	w.
Heshbon, c.	28	n. e.	Kithim, coun.	920	n. w.
Hermón, mou.	122	n. e.	Kinnereth	48	n.
Hevilah, India.	1600	e.	Kison, a Brook	58	n.
Hor, mount. p.	88	f. e.	L.		
Horeb, mount.	120	f.	Lachis	20	f. w.
Horgidgad, p.	112	f.	Lacidemonia, c.	600	w.
Hirmon, Val.	1	f.	Lais, t.	104	n.
Hydaspis, Ri.	4500	e.	Laodicea, c.	520	n. w.
J.			Lebanon, Liba. h.	104	n.
Jabbek	44	n. e.	Lidda, c.	20	n. w.
Jabes, c. in Gil	52	n. e.	Libanath, c.	10	n. w.
Jabnia, c.	16	n. w.	Lifra, c.	846	n.
Jagbeba	34	n. e.	Libnah, p.	104	f. w.
Japho or Foppa	20	n. w.	M.		
Jaser, c.	40	n. e.	Macedonia, co.	900	n. w.
Iconium, c.	420	n.	Machanaim	44	f. e.
Jazar, c.	36	e.	Machelath, p.	72	f. w.
Fericho, c.	10	n. e.	Macedah	8	w.
Fezreel, c.	48	n.	Maon, t.	24	f.
Foppa, t.	20	n. w.	Magdala	52	n.
Igim, p.	52	f. e.	Marchares	20	e.
Jotbatha, p.	132	f.	Marah, p.	160	f. w.
Jordan, 2 head.	104	n.	Maresa, t.	16	w.
River Send.	14	e.	Museroth, p.	72	f.
Jogbeba, t.	34	n. e.	Medaba, c.	28	e.

Chasmona, p.	40	f.	Elensberius, Ri.	200	n.
Chezbon, c. p.	36	e.	Ephesus, c.	544	n.w.
Chorazin, c.	16	n.	Ephraim, mo.	8	f.
Cbius, an Isle.	600	n.w.	Estaoi, t.	20	w.
Claudia, Isle.	588	w.	Esarelon, a Pla.	52	n.
Corinthia, c.	760	w.	Euxine Sea	600	n.
Collossa in Pbr.	520	n.w.	Euphrates. R. h.	300	n.
Cyprus, an Isle.	160	n.	Ephron	44	f.
Cilicia, c.	304	n.	Elah, t.	160	f.
Creet, Isle Ca.	600	w.	Eta, a Rock.	12	w.
Cyrene or Kyr.	816	w.	Edrie, c.		
D.				32	f. e.
Damascus, c.	160	n. e.	G.		
Decapolis, cou.	50	n. e.	Gadara, c.	48	n.
Debir, c.	22	f.	Galatia, coun.	400	n.
Derbe, c.	388	n.	Galilee, coun.	50	w.
Dedan, c.		f.	Gath	34	n.
Dibon, c.	28	n. e.	Gath Hepher, t.	60	n.
Diblatibim, c.	80	n.	Gaza, c.	44	f. w.
Dimon, c.	28	n. e.	Gazer	16	f. w.
Dibon Gad, p.	52	n. e.	Geba, a Hi. & t.	1	w.
Doch, Castle.	10	n. e.	Gebal, c.	160	n.
Dora	48	n.	Genezereth, La	44	n.
Dotham	44	n.	Gerar, t.	30	f. w.
Duma, c.	80	f. w.	Gesem or Gosen	174	f. w.
E.			Gesur, coun.	88	n. e.
Ecron, c.	16	w.	Gibeon, Gibe. c.	4	n.
Eglon, c.	12	f.	Gibon, Hill.	0	w.*
Egbatana, c.	1136	n. e.	Gilead, coun.	60	e.
Eden, c.	400	n. e.	Gilgal, t.	12	n. e.
Edom, or Es. m.	40	f.	Geisfameene Vi.	1	
Elam, or Pe. co.		e.	Gerizim, mou.	8	f. e.
Elim, p.	120	f. e.	Gilboa, mount.	40	n.
Emaus, t.	8	n.	Goren Atad, t.	16	f. e.
Endor, t.	44	n.	Graves of Lu, p	112	f.
Engedi, t.	6	n. e.	Gnidus, t.	492	n. w.

Gibibon,

n.	Gibibon, c.	16	w.	Jabza, p.	24	e.
n.w.	H.			Jazir, p.	36	e.
f.	Harán, or Ch.c.	440	n. e.	Isura, coun.	43	n.
w.	Hemath	100	n.	K.		
n.	Harada, p.	80	f. e.	Karkor, c.	40	n. e.
n.	Hay as Ai.	8	n.	Keder, Sur, De.	80	f. w.
n.	Hazereth, p.	32	f.	Kegilab, c.	20	f. w.
f.	Hexezon Tha.	20	n. e.	Kereth, Ri.	8	n.
w.	Hazor, c.	80	n.	Kiriath-jearim	1	w.
f. e.	Hebron, c.	22	f. w.	Kiriathbaur, c.	32	e.
n.	Heliopolis, c.	224	f. w.	Kir, or Cyrene	816	w.
n.	Heshbon, c.	28	n. e.	Kithim, coun.	920	n.w.
w.	Hermón, mou.	122	n. e.	Kinnereth	48	n.
w.	Hevilah, India.	1600	e.	Kison, a Brook	58	n.
n.	Hor, mount. p.	88	f. e.	L.		
n.	Horeb, mount.	120	f.	Lachis	20	f. w.
w.	Horgidgad, p.	112	f.	Lacidemonia, c.	600	w.
n.	Hirmon, Val.	1	f.	Lais, t.	104	n.
w.	Hydaspis, Ri.	4500	e.	Laodicea, c.	520	n.w.
w.	J.			Lebanon, Libah	104	n.
w.	Jabbek	44	n. e.	Lidda, c.	20	n.w.
n.	Jabes, c. in Gil.	52	n. e.	Libanath, c.	10	n.w.
n.	Jabnia, c.	16	n.w.	Lifra, c.	846	n.
w.	Jagbeba	34	n. e.	Libnah, p.	104	f. w.
w.	Japko or Joppa	20	n.w.	M.		
e.	Jaeser, c.	40	n. e.	Macedonia, co.	900	n.w.
.	Iconium, c.	420	n.	Machanaïm	44	f. e.
.	Jazar, c.	36	e.	Machelath, p.	72	f. w.
e.	Fericho, c.	10	n. e.	Macedah	8	w.
e.	Fezreel, c.	48	n.	Maon, t.	24	f.
.	Foppa, t.	20	n.w.	Magdala	52	n.
.	Igim, p.	52	f. e.	Marchares	20	e.
.	Jotbatha, p.	132	f.	Marah, p.	160	f. w.
.	Jordan, head.	104	n.	Maresa, t.	16	w.
.	River Send.	14	e.	Museroth, p.	72	f.
.	Jogbeba, t.	34	n. e.	Medaba, c.	28	e.

Medemena, t.	44	f. w.	Orthosia, c.	200	n.
Megiddo	46	n.	Opbel, Tower.	0	e.
Memphis, c.	244	f. w.	P.		
Midian, c.	160	f.	Parthia, coun.	1512	e.
Mickmas, c.	10	n.	Pathmos, Isle.	580	n. w.
Minnetb, t.	32	e.	Paphos, c.	212	n.
Mitylene, Isle.	624	n. w.	Paran, c.	104	f.
Mizpah, c.	18	n. e.	Patara, c.	408	n. w.
Moab, coun.	40	f.	Penuel, t.	40	f. e.
Moriab, moun.	0	e.	Pelusio	172	f. w.
Myletus, t.	104	n. w.	Peraa	16	e.
Masloth, c.	92	n.	Persepolis, c.	1240	e.
Merom, Ri.	44	n.	Perga, c.	356	n.
Mylete, Isle.	349	w.	Pergamus, c.	228	n. w.
Mysa, mag. co.	800	n. w.	Phunon, p.	64	f. e.
Modin, t.	14	n. w.	Phillippa, c.	936	n. w.
Mithea, p.	56	f. w.	Pisgab, mou. p.	20	e.
Myra, t.	380	n. w.	Plain of Mamr	22	f. w.
N.			Plain of the Vi.	56	f. e.
Nabaioth, coun.	40	e.	Ptolomais, c.	76	n.
Nabach, c.	38	n. e.	Philadelphia, c.	220	n. w.
Naim, c.	48	n.	Puteoly, c.	1388	w.
Nazareth, t.	64	n.	Pibachiroth, p.		
Nebo, c. & mou.	20	e.	Pbrygia, coun.	600	n. w.
Neapolis, c.	380	n. w.	Palm, Tree	8	n.
Nepthily, c.	84	n.	R.		
Nicapolis, c.	920	n. w.	Raemeses, c.	147	f. w.
Niniveh, c.	634	n. e.	Rages, c.	1396	n. e.
Nob, c. or Nobe	16	n. e.	Ramah, c.	8	n.
Noph, c. Memp.	244	f. w.	Reckob, c.	100	n.
O.			Red Sea	160	f.
Oboth, p.	56	n. e.	R phadim, p.	132	f. w.
Odukam, Cave.	8	f. w.	Riblatk, c.	80	n.
Oreb, Rock	12	n.	Rbegium, c.	1332	w.
Ophir, or India,	1500	e.	Rhodes, Isle, c.	140	n. w.
Olives, mount.	2	e.	Rimmon Pharez	108	f. e.

Rissa, p.	100	f. e.	Sytris, Gulf	1000	w.
Rishmatb, p.	112	f. e.	Sier, mount	28	f.
Rogel		e.	Syracusia, c.	1750	w.
Rome, c. in Italy	1340	n. w.	T.		
Ramoth in Gil.	48	e.	Tabor. moun.	56	n.
Rabba	64	n. e.	Tarsus, c.	304	n.
S.			Tecoab, c.	8	f. e.
Saba, c.	964	f.	Tbabath, p.	68	f. w.
Salamais	196	n.	Tbarab, p.	60	f. w.
Samaria, c. cou.	32	n.	Tbamor, c.	388	n. e.
Samus, Isle.	560	n. w.	Tbob or Tob, co	104	n. e.
Sapber, mou. p.	88	f. w.	Tbirza, c.	24	n.
Sardis, c.	536	n. w.	Tbipsa, t.	24	n.
Sarepta, c.	112	n.	Tbisbe, t.	48	n. e.
Salem, t.	40	n.	Tbiatira, c.	600	n. e.
Sea of Galilee	44	n.	Tripolis, c.	170	n.
Seleucia, c.	280	n.	Timnah, c.	6	n. w.
Sephela, a Plain	14	w.	Themam	40	f.
Sichem, t.	36	n.	Troas, c.	720	n. w.
Siddim, Val.	20	f. e.	Trogillum	560	n. w.
Sichor, Ri.	72	f. w.	Tyberia	48	n.
Sidon, c. Zidon	36	n.	Tyrus or Zor	100	n.
Sin, Defart, p.	156	f. w.	U.		
Sina, mount, p.	120	f.	Ur, in Chaldea	624	e.
Silob, mount	4	n.	Uz, Job's cou.	50	e.
Sinear, as Chal.	600	e.	Z.		
Sion, mount	c		Zalmona, p.	80	f.
Sorock, a Ri. he.	12	w.	Zarea, c.	18	w.
Sobal, coun.	600	n.	Zeb, Winepress	12	u.
Sodom, c.	24	f. e.	Zemeraim, Plai	8	n.
Succoth, t.	40	f. e.	Ziglag	40	f. w.
Smyrna, c.	540	n. w.	Zin Cades, p.	120	f.
Sunem, c.	48	n.	Zipb	22	n. e.
Sur, Defart	30	f. e.	Zoan or Ta- }	232	f. w.
Sychar, Sichem	36	n.	nis, in Egypt }		
Syria, or Aram	100	n.	Zoba, c.	600	n.

A Farther Explanation of the foregoing Table.

Note, Every page hath six Columns, the first hath the Names of most of the Noted Places mentioned in the Holy Scriptures, several of them are called by two or more Names, which are sometimes here inserted; there is also at the end of the Name generally a Letter, or more, as c. for City, t. for Town, p. for such Places as the *Israelites* pitched at in their Journey out of Egypt, ri. for River, coun. for Countrey, moun. for Mountain or Hill, val. for Valley, &c.

The second Column contains the distance in Miles that the aforesaid Places are from *Jerusalem*, as near as I can find out, after diligent search, but large Countreys are set down as the nearest part thereof, and such places as are far distance, it is hard to find out the exact number of Miles, yet (I suppose) it is so near to the Truth, that any Error will not easily be perceived therein.

The third Column contains the Point of the Compass those Places bear from *Jerusalem*, although all are not exact, for here are but eight Points mentioned of the 32, so this may serve to shew which way those Places incline towards.

The last three Columns are to be understood in the same manner, as these three thus described; and if any are desirous to know where the Names of all or most of these Places are to be found in the Holy Scripture, they may have recourse unto a large Alphabetical Table, or Concordance, (Printed in King James the first his Days and may be Bound with some Bibles) which sheweth the same, and also the signification thereof.

A CHRONOLOGY,

In which is inserted the Time, (or near it) of the Births of the Fathers, and Patriarchs, also the Times of the Judges, Kings, Prophets, &c. with several other Remarkable Things, Recorded in the Historical Parts of the Holy Scriptures, with some other Things out of other History, inserted according to Time; but about those Things that are of Great Antiquity Authors sometimes differ, as to the exact Time and Year; therefore to avoid following many Authors, I shall chiefly make use of Chri. Helvicus his Chronology, which I think agrees the nearest to Scripture Account, for Men differ as to the number of Years from the Creation to the Birth of Christ, some allow 3930. but this Account is 3947. some about 3960. others 3967. others 4000. with several other Opinions relating to this Thing, which I shall omit.

Note,

Note, That the first Column of Figures signifies in or about the Year of the World, and the last in or about the Year before Christ.

The Creation of the World, and the things therein; Adam Created the sixth day, Gen. 1. lived				
930 Years,	0031	3947		
Seth born, Gen. 5. 3. lived 912 years	0130	3818		
Enos born, Gen. 5. 6. lived 905 years	0235	3713		
Cainan born, Gen. 5. 9. lived 910 ye.	0325	3623		
Mabalaleel born, Gen. 5. 12. lived				
895 years,	0395	3553		
Jared born, Gen. 5. 15. lived 962 ye.	0460	3488		
Enoch the 7th from Adam born,	0622	3326		
Methuselah born, Gen. 5. 21. li. 969 y.	0687	3263		
Lamech born, Gen. 5. 25. lived 777 y.	0878	3076		
Enoch's Translation, Gen. 5. 24.	0987	2967		
Noah the 10th from Adam born,				
Gen. 5. 28. lived 950 years,	1056	2892		
Japhet born, Gen. 5. 32.	1556	2392		
Sem born, Gen. 11. 10. lived 600 years	1558	2390		
The World Drowned, and Noah and his Family preserved, Gen. 7. 6.				
Arphaxad born, Gen. 11. 10. liv. 438 y.	1658	2290		
Selah born, Gen. 11. 12. lived 433 yea.	1693	2255		
Heber born, Gen. 11. 14. lived 464 y.	1723	2225		
Peleg born, Gen. 11. 16. lived 209 ye.	1757	2191		
The Building of Babel, Gen. 11. 3, 4, 5.				
Regu born, Gen. 11. 18. lived 239 yea.	1787	2161		
Serug born, Gen. 11. 20. lived 230 yea.	1819	2129		
Nabor born, Gen. 11. 22. lived 148 y.	1849	2100		
Terah born, Gen. 11. 24. lived 205 ye.	1878	2070		
Abram				

figures
the
Year

947
818
713
623
553
488
26
63
76
57

92
92
0

2
0
5
5
1
0

<i>Abram</i> born, <i>Gen.</i> 11. 26. the 10th from <i>Noah</i>	1948	2000
<i>Sarah Abram's Wife</i> born, <i>Gen.</i> 17. 17.	1958	1990
Heathen Gods began	2006	1942
<i>Abram</i> leaveth his Fathers House, and the Lord bleſſeth him, <i>Gen.</i> 12. 4. Here begins the 430 Years		
<i>Exod.</i> 12. 41. <i>Gal.</i> 3. 17.	2023	1925
<i>Iſhmael</i> born, <i>Gen.</i> 16. 15. liv. 137 y.	2034	1914
Circumciſion Inſtituted, and <i>Sodom</i> and <i>Gomorrhah</i> deſtroyed, <i>Gen.</i> 17. 10. and 19. 24.	2047	1901
<i>Iſaac</i> born, <i>Gen.</i> 21. 5.	2048	1900
<i>Abraham</i> offers up <i>Iſaac</i> , <i>Gen.</i> 22.	2064	1884
<i>Iſaac</i> Marrieth <i>Rebecca</i> , <i>Gen.</i> 25. 20.	2088	1860
The Birth of <i>Jacob</i> and <i>Eſau</i> , <i>Gen.</i> 25. 26.	2108	1840
<i>Abraham</i> dieth, Aged 175 years, <i>Gen.</i> 25. 7.	2123	1825
<i>Iſaac</i> goeth to Inhabit in <i>Gerar</i> , <i>Gen.</i> 6. 1.	2129	1819
<i>Jacob</i> ſerveth <i>Laban</i> 7 yea. for <i>Rachel</i>	2185	1763
The 7 years finiſhed, <i>Leah</i> is given to <i>Jacob</i> , on whom he begat 6 Sons and 1 Daughter, which is thought by ſome to be <i>Job's Wife</i> , <i>Gen.</i> 30. for he lived about this time	2192	1756
<i>Jacob</i> ſerveth 7 years more for <i>Ra- chel</i> , on whom he begat <i>Joſeph</i> and <i>Benjamin</i> , <i>Gen.</i> 30. 24.	2199	1749
<i>Jacob</i> departeth from <i>Laban</i> , <i>Gen.</i> 31.	2205	1743
<i>Joſeph</i> ſold into <i>Egypt</i> , <i>Gen.</i> 37. 27.	2217	1731
<i>Iſaac</i> dieth, <i>Gen.</i> 35. 28.	2228	1720
<i>Joſeph</i> Interpreteth <i>Pharaoh's Dreams</i> and is made Ruler over <i>Egypt</i> , <i>Gen.</i> 41. 40.	2229	1719

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The 7 years of Plenty began, <i>Gen. 41.</i>	2230	1718
The 7 years of Famine began, <i>Gen. 41.</i>	2237	1711
Jacob with his Family goeth into <i>Eg.</i>	2239	1709
Jacob dieth, Aged 147, <i>Gen. 47. 28.</i>	2255	1693
Joseph dieth, Aged 110, <i>Gen. 49. 26.</i>	2309	1639
Levi the Son of Jacob dieth, <i>Ex. 6. 19.</i>	2332	1616
Rahab the Son of Levi dieth, <i>Ex. 6. 18.</i>	2362	1586
Aaron the Son of Amram, the Son of Rahab born, <i>Exod. 6. 20.</i>	2370	1568
Moses his Brother born, <i>Exod. 7. 7.</i>	2373	1565
Cecrops Built Athens, and Reigned,	2394	1554
Moses slayeth the Egyptian, <i>Acts 7. 23.</i>	2413	1535
Caleb born, <i>Jos. 14. 7, 10, 11.</i>	2414	1534
Israelites under the Conduct of Moses depart out of Egypt, <i>Exod. 12.</i> and Law given,	2453	1495
The Kingdom of Troy began about this time by Dardanus,	2471	1477
Moses and Aaron dieth, <i>Deut. 34. 7.</i> and the Israelites enter Canaan un- der the Command of Joshua, ha- ving Travelled 40 Years in the Wilderness,	2493	1455
Joshua dieth, Orboniel succeeds, <i>Josb.</i> 24. 29. <i>Judg. 3.</i>	2523	1425
Cadmus is said to have brought the Characters of Letters into Greece about this time,	2530	1418
Ehud Judge, and Shamgar, <i>Jud. 3. 15, 31.</i>	2532	1416
Tantalus Amphion Founder of Thebes, Barak and Deborah the Prophetess, judged Israel 40 Years. and over- came Sisera, whose Army was said to be 200000 Men,	2612	1337
Janus the first King of the Latins,	2621	1326
Gideon Judged 40 Years, <i>Judg. 8. 20.</i>	2652	1296

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1718	Abimelech Son of Gideon, Judged,		
1711	Judg. 9. 22.	2692	1256
1709	Thola Judge 23 years, Judg. 10. 2.	2695	1253
1693	Heathen Gods now greatly multi-		
1639	plied, as <i>Hercules</i> , <i>Apollo</i> , <i>Easter</i> ,	2715	1233
1616	Jair Judge 22 years, Judg. 10. 3.	2718	1220
1585	Jephtha Judge 6 years, Judg. 12. 7.	2758	1190
	Ebzan Judge 7 years, Judg. 12. 9.	2764	1184
1568	The History of <i>Ruth</i> , now suppo-		
1565	sed to be written,		
1554	The Destruction of <i>Troy</i> , which was		
1535	about 300 years after its Found-		
1534	ing,	2768	1180
	Elon judged 10 years, Judg. 12. 11.	2771	1177
	Abdon judged 8 years,	2781	1167
1495	Sampson judged 20 years, Judg. 16. 31	2789	1159
1477	Sampson pulleth down the House of		
	the <i>Philistines</i> , and slayeth 3000		
	with himself, and <i>Eli</i> the Priest		
	began to Rule, 1 <i>Sam.</i>	2808	1140
	About this time <i>Brute</i> is said to come		
	into this Nation,		
155	<i>Samuel</i> the Prophet born, 1 <i>Sam.</i> 1.	2815	1133
	<i>Samuel</i> called of the Lord, 1 <i>Sam.</i> 3.	2827	1121
125	London Built,	2843	1105
	<i>Eli</i> , at the News of the Ark of God		
	being taken, fell down backwards		
18	and brake his Neck, 1 <i>Sam.</i> 4. 18.	2848	1100
6	<i>David</i> born, 2 <i>Sam.</i> 5. 4.	2860	1088
	<i>Saul</i> the first King of <i>Israel</i> Anointed	2879	1069
	<i>David</i> slew <i>Goliath</i> , 1 <i>Sam.</i> 17.	2885	1063
	<i>Saul</i> slain in Battel, <i>David</i> succeeds,	2888	1060
	The Adultery of <i>David</i> with <i>Baths.</i>	2906	1042
7	<i>Solomon</i> born, 2 <i>Sam.</i> 12. 24. <i>Gad</i> prop.	2911	1037
6	<i>Homer</i> born,	2912	1036
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Solomon began to Reign, reigned 40 years,	2929	1019
The Temple finisht in 7 years,	2939	1009
Queen of Sheba cometh to Jerusalem, and admireth Solomon's Wisdom,	2956	992
Tork Built,	2961	987
Abia, Iddo, and Shemeia, Prophets, 2 Chron. 9. 29.		
Rehoboam began to reign, 1 Ki. 14. 21	2969	979
Abiam began, and reigned 2 years,	2986	962
Assa began, and reigned 41 years,	2988	960
Jebu, Hanani, Asaria, Prophets, 2 Ch. 19. 2. and 16. 7.		
Leicester Built,	3000	948
Josaphat began and reigned 25 years,	3029	919
Elijah the Prophet in his Days, 1 Kin. 17. and Elifha was Anointed in his stead,		
Joram began and reigned 8 years, 2 Kin. 8. 17.	3054	894
Licurgus the Law-giver. Canterbury Built,	3058	890
Abazia 1 y. Athalia Queen, 2 Kin. 11.	3062	886
Joash began and reigned 40 years,	3069	879
Carthage Built by Dido,	3075	873
Amassa began and reigned 29 years, 2 King. 14.	3109	839
Elifha the Prophet died, having Taught 60 years	3108	840
Jonah the Prophet, 2 King. 14. 25.		
About this time ended the Assyrian Monarchy, which continued about 1350 years from Nimrod's days.	3110	838
Uzias began, and reigned 52 years, Obadiah, Amos, and Joel, Prophets,	3138	810
Jotham began, and reigned 16 years,	3190	758

Hezekiah

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019	Hezekiah born, 2 King. 18.2.	3197	751
009	The Building of Rome by Romulus,	3198	750
992	Isaiab and Micah began to Prophecy		
987	Achaz began to reign, reigned 16 years, 2 King. 16. 2.	3206	742
	Isaiab prophesieth of the Birth of Christ, Isa. 7. 14.		
	Obadiab Prophet,		
979	Hezekiah began, and reigneth 29 ye.	3222	726
962	Rabshakeh Blasphemeth the God of Israel, and the Angel of the Lord destroyeth 185,000 of the Assyrians in one Night, 2 Kings 19. 35.	3235	713
948	The Sun goeth 10 degrees backward, 2 Kings 20. 11.	3235	713
919	The Ten Tribes of Israel carried away Captive by Shalmaneser into Medes, 2 Kings 18. 11.	2228	720
894	Numa Pompilius added the 11th and 12th Month to the Year, about this time,	2250	698
890	Manasses began, and reigned 55 years, 2 Kings 21. 1.	2251	697
886	He being a wicked King, caused the Prophet Isaiab to be sawn asunder through the midst,		
879	Amon reigned 2 years, 2 Kings 21. 19	3306	642
873	Josiah began, and reigned 31 years, 2 Kings 22. 1.	3308	640
839	Jeremiah, Zephaniab, Prophets, Huldah the Prophetess, the Book of the Law found, 2 Kings 22.	3326	622
840	Jehoabaz 3 Months, Jehoakim 11 Years, and then was Bound in Chains to be carried Captive into Babylon, 2 Chron. 36. 6.	3350	609
838			About
810			
858			
819			

About this time lived <i>Solon, Thales, Sappho, Pericles, Periander, &c.</i>		
called Wise Men.		
<i>Jechonias</i> reigned 3 Months, <i>Sedechias</i> began, here began the 70 Years Captivity spoken of by <i>Jeremy</i> , <i>Cap. 29. 10 Chron. 36. 21.</i>	3350	598
<i>Ezekiel</i> , being a Captive, began to Prophesie,	3354	594
<i>Sedechias</i> , being taken by <i>Nebuchadnezzar</i> King of <i>Babylon</i> , had his Eyes put out, and carried away with above 3000 <i>Jews</i> ,	3360	588
The Temple, with the City of <i>Jerusalem</i> , Burnt by <i>Nebuzar-adan</i> , <i>Jer. 52. 13.</i>	3361	587
<i>Daniel</i> Prophesied in Captivity, The Monarchy of the <i>Persians</i> , <i>Cyrus</i> , The return of the <i>Jews</i> out of Captivity, under the Conduct of <i>Zerubbabel</i> , to the number 42360 to Build <i>Jerusalem</i> again, <i>Ezra 2. 64.</i>	3420	528
<i>Pythagoras</i> the Philosopher,		
<i>Cambyfes</i> Son of <i>Cyrus</i> 8 years,	3422	526
<i>Darius Hydaspis</i> reigned 36 years,	3429	519
<i>Anaximander</i> Invented the Sphere,		
<i>Xerxes</i> , or <i>Abasuerus</i> , reigned 20 ye.	3465	483
The History of <i>Esther</i> ,		
<i>Artaxerxes Longimanus</i> , reigned near 40 years,	3485	463
<i>Euclides</i> , <i>Hippocrates</i> , <i>Democritus</i> ,		
<i>Darius Nothus</i> , 19 years,	3525	423
<i>Haggai</i> , <i>Zechariah</i> , and <i>Malachi</i> , Prophets,		
<i>Socrates</i> , <i>Aristophanes</i> , <i>Thucydides</i> ,		

	<i>Nehemiah</i> is sent to Build the Wall of <i>Jerusalem</i> again, <i>Neh.</i> 2. 1.	3595 448
	<i>Artaxerxes Mnemon</i> , 43 years,	3545 402
	<i>Rome</i> taken by the <i>Gauls</i> . <i>Xenophon</i> , <i>Plato</i> , <i>Phocion</i> , <i>Isocrates</i> , about this time,	
598	<i>Mulmutius Duvvallo</i> is said to be the first K. of <i>Britain</i> that was Crown- ed with Gold; also appointed Mea- sures & Weights for Men to sell by,	3550 398
594	<i>Oecbus</i> succeeded <i>Artaxerxes</i> ,	3588 360
	<i>Arser</i> , or <i>Arfaces</i> , reigned 3 years,	3610 338
88	<i>Darius</i> the last King of the <i>Persians</i> , he was overcome by <i>Alexander</i> the Great, in the sixth year of his Reign; about then began the <i>Gre-</i> <i>cian</i> Monarchy,	3615 333
	<i>Fergusus</i> Duke of <i>Scotland</i> ,	3618 330
	<i>Aristotelis</i> , <i>Euclides</i> , Famous,	
	<i>Berosus</i> the Historian,	3692 256
	<i>Chrysippus</i> Famous about this time,	3723 226
28	<i>Archimedes</i> the Famous Mathematician	3738 210
26	<i>Judas Maccabeus</i> King of the <i>Jews</i> ,	3783 165
19	<i>Cato</i> , <i>Jesus Sirach</i> , about this time,	3728 220
	<i>Jonathan</i> , Brother to <i>Judas</i> , succeeds, 1 <i>Mac.</i> 9. 3.	3789 159
83	<i>Simon</i> succeeds, 1 <i>Mac.</i> 13. 41.	3807 141
	The Sects of the <i>Pharisees</i> , <i>Sadducees</i> , and <i>Essaens</i> ,	
63	<i>Johannes Hircanus</i> , 1 <i>Mac.</i> 16.	3814 134
	<i>Cicero</i> flourished about	3843 104
22	<i>Aristobulus</i> , <i>Alexander Jamnes</i> , <i>Pompey's</i> time,	3845 103
	<i>London</i> Walled about by King <i>Lud</i> ,	3874 74
	<i>Julius Caesar</i> Dictator began,	3900 48
	<i>Caesar</i> Corrects the Kalendar,	3902 46
		3904 44

<i>Julius</i> is slain, and <i>Augustus</i> succeeds,	3907	41
<i>Dioscorides</i> , <i>Virgil</i> , <i>Horace</i> , <i>Tibullus</i> ,		
<i>Herod</i> King of <i>Judea</i> ,	3911	37
The Virgin <i>Mary</i> Born,	3932	16
<i>Ovid</i> wrote,	3940	8
<i>Christ Jesus</i> Born, in which is fulfil-		
led the Prophecies of the Prophets		
concerning him, <i>Gen.</i> 49. 10. <i>Isa.</i>		
7. 14. <i>Mic.</i> 5. 2. &c.	3947	

Note, That these following are in or near the Year of Christ.

<i>Herod</i> slayeth the Innocent Children, <i>Mat.</i>		
2. 16.		2
<i>Christ</i> Disputeth in the Temple, <i>Luke</i> 2. 46.		13
<i>Tiberius Caesar</i> began; <i>T. Livius</i> ,		16
<i>Strabo</i> , Historian,		24
<i>John</i> and <i>Paul</i> , Apostles, Born,		10
<i>Christ</i> Baptized by <i>John</i> in <i>Jordan</i> , <i>Luke</i> 3. 23.		30
<i>Christ</i> turned Water into Wine, <i>John</i> 2. 9.		
talketh with the Woman of <i>Samaria</i> , <i>John</i>		
4. Healeth a Rulers Son, <i>John</i> 4. 50.		31
Healeth a Woman of her Bloody Issue, <i>Mat.</i>		
9. 20. and a Man at the Pool of <i>Bethesda</i> ,		
<i>John</i> 5. and a Man with a withered Hand;		
chose his Twelve Disciples, <i>Luke</i> 6. 10,		
13. 14, 15, 16. restored <i>Jarus</i> Daughter to		
Life, <i>Mark</i> 5. 41. and many more Mira-		
cles did he in the Second Year,		32
He fed Five Thousand Men, <i>John</i> 6. healeth		
one both Blind and Dumb; the <i>Greek</i>		
Woman's Daughter, <i>Mark</i> 5. fed Four		
Thousand, <i>Mat.</i> 15. 36. Transfigured in		
the Mount, <i>Mark</i> 9. healed a Man Born		
Blind, <i>John</i> 9. and much more.		33

In the fourth year of his Ministry, he recited unto his Disciples that which is called the Lord's Prayer, *Luke 11.* and what is mentioned in the 12th and 13th Chapters, travelled throughout *Galilee*, with a multitude, spake many Parables, as of the Prodigal Son, *Dives* and *Lazarus*, healeth 10 Lepers, *Luke 17.* raised *Lazarus* to Life, *John 11.* Curseth the Fig-tree, weepeth over *Jerusalem*, *Mat. 23.* with much more, too numerous to speak of in this place; after which, about the beginning of the second Month, called *April*, upon the fifth Day of the Week at Even, eat the Passover with his Disciples, was Betrayed that Night, Crucified on the sixth Day, rose again on the first Day, and about Forty Days after Ascended into Glory.

Stephen Stoned, *Acts 7.* *Simon* the Sorcerer, 34
Paul Converted, *Acts 9.* 35

Cæsar Caligula, fourth Emperor of *Rome*, 39

The Disciples first called Christians, *Acts 11.*

Matthew wrote; *Agabus* Prophecieth of a Dearth, *Acts 11.* 41

Claudius Cæsar,

The Apo. James Beheaded by *Nero*, *Acts 12.* 43

Paul, *Peter*, and *Barnabas* were delivered out of Prison by an Angel; *Herod* eaten of Worms, *Acts 12.* 44

Peter at *Joppa*, 40. *Mark* wrote. 44

Paul and *Barnabas* taken for Gods, *Acts 14.* 46

Apostolical Council at *Jerusalem*, *Acts 15.* 49

The Virgin *Mary* dieth; *Paul* at *Ephesus*, 45

Paul and *Silas* Travel together; *Lydia* Conv. 50

Paul at *Athens*, the 1st and 2d Epistles to the

Thessalonians, 51

<i>Paul</i> wrote, first Epistle to <i>Timothy</i> ,	43
<i>Eutychus</i> raised to Life. 40 Jews Bound themselves under a Curse to Kill <i>Paul</i> ;	
<i>Nero</i> <i>Cesar</i> Emperor,	57
<i>Paul</i> brought to <i>Rome</i> , and wrote to the <i>Galatians</i> , <i>Ephesians</i> , <i>Philippians</i> , <i>Colossians</i> , <i>Philemon</i> , and <i>Hebrews</i> ,	60
<i>Joseph</i> of <i>Arimathea</i> came into <i>England</i> ,	64
Second Epistle to <i>Timothy</i> ; <i>Paul</i> Beheaded at <i>Rome</i> ,	68
Now began the first Persecution of the Christians under <i>Nero</i> ; <i>Peter</i> and <i>Amipias</i> Martyrs, <i>Rev.</i> 2. 13.	67
<i>Jerusalem</i> destroyed under <i>Fla. Vespasian</i> ,	71
Second Persecution began under <i>Domitian</i> , Emperor,	92
<i>John</i> Evangelist Banished into <i>Pathmos</i> , where he wrote the <i>Revelations</i> , <i>Rev.</i> 1. 9.	96
<i>John</i> returned to <i>Ephesus</i> , and wrote his <i>Gos.</i>	98
Died,	100
The third Persecution under <i>Trajan</i> , <i>Ignatius</i> , Martyr,	102
<i>Aristides</i> writ an <i>Apology</i> for the Christians	122
The fourth Persecution under <i>Adrian</i> , Emp.	126
<i>Justinus</i> is turned Christian,	129
Fifth Persecution under <i>Auro. Philo. Antoni. Verus</i> , Emperor,	168
Then was <i>Lucius</i> first Christian King of <i>Britan</i> .	
<i>Polycarpus</i> , Martyr. <i>Tertullian</i> wrote,	
Sixth Persecution under <i>Severus</i> , <i>Origen</i> ,	204
Seventh Persecution under <i>Maximinus</i> , <i>Cypr.</i>	240
Eighth Persecution under <i>Decius</i> , <i>Laurence</i> Martyr,	242
Ninth Persecution under <i>Valerian</i> ; <i>Paul</i> the Hermit,	261

93	Tenth Persecution under <i>Dioclesian</i> ; <i>Alban</i> first <i>English</i> Martyr; 17000 put to Death in 30 Days,	304
57	<i>Roman</i> Indiction began,	315
60	<i>Constantine</i> the Great, Assembled a Council of 318 Bishops at <i>Nice</i> , which Condemned <i>Arius</i> ,	326
64	<i>Julian</i> the Apostate: About now lived <i>Hilary</i> , <i>Basil</i> , <i>Ferom</i> , <i>Ambrose</i> , <i>Augustine</i> , and others,	361
68	The coming of the <i>Saxons</i> into <i>Britain</i> ,	447
67	Singing of Psalms brought into the Church by <i>Damasus</i> ,	383
71	<i>Proclus</i> the Mathematician flourished,	511
92	<i>England</i> divided into Seven Kingdoms,	527
96	Swearing by the Gospel, Instituted by <i>Justinian</i> ,	528
98	Bells, first ordained to Assemble People together, by <i>Sabinian</i> Bishop of <i>Rome</i> ,	603
100	The first Pope (so call'd) <i>Boniface</i> the 3d,	609
102	The coming of <i>Mahomet</i> the Turk,	622
122	<i>England</i> divided into Parishes,	636
126	rent first set up in <i>England</i> ,	640
129	Organs brought into the Church, by <i>Vincilian</i> ,	657
168	<i>Bede</i> , called <i>Venerable</i> , flourished,	696
	<i>Tythes</i> Established first in <i>England</i> ,	786
204	<i>Egbert</i> King of the <i>West Saxons</i> , subdued the other Kings, then in this Nation, which now began to be called <i>England</i> , and before call'd <i>Britain</i> ,	800
240	<i>Danes</i> Invaded <i>England</i> about this time; also <i>England</i> divided in Shires and Counties.	873
292	<i>Danes</i> Invade <i>England</i> again,	982
261	A Terrible Earthquake in <i>England</i> ,	1048
Tenth		Trau.

Transubstantiation brought into the Church by the Council of <i>Lateran</i> ,	1039
<i>William Duke of Normandy</i> Invades <i>England</i> ,	1066
He caused an exact Survey to be taken of <i>England</i> , and the People to be numbered, and their Name taken,	1083
And accordingly laid a Tax of six Shillings upon every Hide of Land, (which is about 100 Acres)	1083
The first Parliament that was chose in that method now used, viz. of Nobility, Clergy, and Commons,	1116
<i>Johannes de Temporibus</i> died, who is reported to live 361 years,	1139
The Rise of the <i>Waldenses</i> , a Religious People,	1160
<i>Ireland</i> reduced to <i>England</i> by <i>Henry 2d</i> ,	1177
<i>London</i> Paved, and Thatching left off,	1186
The first Mayor of <i>London</i> , <i>Henry Fitz Alvin</i> ,	1190
A great Dearth for 3 or 4 years together. Wheat was sold for a Mark the Quarter, which before was but 12 Pence, Silver then at 20 Pence an Ounce,	1204
<i>London-Bridge</i> Built with Stone,	1209
Bible divided into Chapters,	1252
Many Die through extremity of the Sun's heat,	1283
Five Suns seen at one time; a Dearth followed, of which many died,	1233
Another great Dearth, that many eat Dogs, Horses, &c.	1315
Pride exceeded in Monstrous Apparel,	1401
A Decree for <i>Lantern</i> and <i>Candle-light</i> ,	1471
<i>Spanish</i> Inquisition began,	1479

	<i>Martin Luther</i> that Great Reformer, born,	1483
	Printing first in <i>England</i> , by <i>Will. Caxton</i> .	1471
	<i>America</i> first discovered, by <i>Cbr. Columbus</i>	1492
	The Pope's Authority Abrogated,	1534
	The <i>Psalms</i> began to be turned into Metre by <i>T. Sternhold</i> ,	1552
	The Terrible Massacre in <i>France</i> ,	1572
	A General Earthquake,	1580
	The Calendar Corrected, now called the New Stile,	1582
	<i>Virginia</i> planted. The Powder Plot,	1605
	The Bible New Translated,	1611
	The New-River-Water brought to <i>London</i> .	1613
	The Terrible Massacre in <i>Ireland</i> ,	1642
	A Great Plague in <i>London</i> , whereof died about 100000,	1665
	A Dreadful Fire, which Burnt 87 Parishes in <i>London</i> ,	1666
	The first Coining of Copper Farthings in the Tower,	1672
	A Great Frost for 13 Weeks,	1684
	Womens Monstrous Head-dresses frequent	1690
	An Earthquake in <i>England</i> the 8th of the 7th Month,	1692

Note, To find out how long it is to the present Year, that any of these following Kings were, or Thing remarkable in this Chronology, subtract the Time given from the present Year, and the remainder is the Years expired; but such Things as are before the Birth of Christ, add the Year of Christ, and the Years before together, and the Total is the time required.

A Catalogue of the Kings and Queens of *England*, from the Heptarchy, with the Year of Christ when they began, and Years they Reigned; also what Relation they had to their Predecessors.

Kings Names.	Began.	Reign.
<i>Egbert</i> , Son of <i>Alemond</i> , Son of <i>Offa</i> ,	800	37
<i>Ethelwolf</i> , his Son,	837	20
<i>Ethelbald</i> , his Son,	857	5
<i>Ethelbert</i> , and <i>Ethelred</i> , Brothers,	862	9
<i>Alfred</i> , Brother,	872	28
<i>Edward</i> , Son,	900	24
<i>Athelstan</i> , Son,	924	16
<i>Edmund</i> , Brother,	940	6
<i>Eldred</i> , Brother,	946	9
<i>Edwin</i> , Cousin,	955	3
<i>Edgar</i> , Brother,	959	16
<i>Edward</i> , Son,	975	3
<i>Ethelred</i> , Brother,	978	38
<i>Edmund</i> , Son,	1006	1
<i>Canutus</i> , a Dane,	1017	20
<i>Harold</i> , an Usurper,	1036	4
<i>Hardy-Canut</i> , Son of <i>Canutus</i> ,	1040	2
<i>Edward</i> , called the Confessor, Son of <i>Ethelred</i> , said to be the first that Cured the King's-Evil,	1042	24
<i>Harold</i> , Son of Earl <i>Goodwin</i> ,	1065	1
	<i>William</i>	

	beg.	re.
William I. Son of Robert Duke of Normandy,	1066	22
William II. Son,	1087	13
Henry I. Brother,	1100	35
Stephen, Earl of Bullen,	1135	18
Henry II. Son of Maud, the Empress,	1154	34
Richard I. Son,	1189	9
John, Brother,	1199	17
Henry III. Son,	1216	56
Edward I. Son,	1272	34
Edward II. Son,	1307	19
Edward III. Son,	1326	50
Richard II. Grandson	1377	42
Henry IV. Cousin-Germ.	1399	13
Henry V. Son,	1413	0
Henry VI. Son,	1422	38
Edward IV. Son to Richard D. of York,	1460	22
Edward V. Son,	1483	0
Richard III. Uncle.	1483	2
Henry VII. Son to Edmund Earl of Rich-		
mond, Son of Katherine Queen Da-		
Henry the Fifth,	1485	23
Henry VIII. Son,	1509	37
Edward VI. Son,	1547	6
Mary I. Sister,	1553	5
Elizabeth, Sister,	1558	14
James I. Son of Mary Queen of Scotland,	1602	22
Charles I. Son,	1625	23
Charles II. Son,	1649	26
James II. Brother,	1684	5
William III. } Nephew; whom God pro-		
and } serve from all his Enemies,	1689	
Mary II. } Daughter		

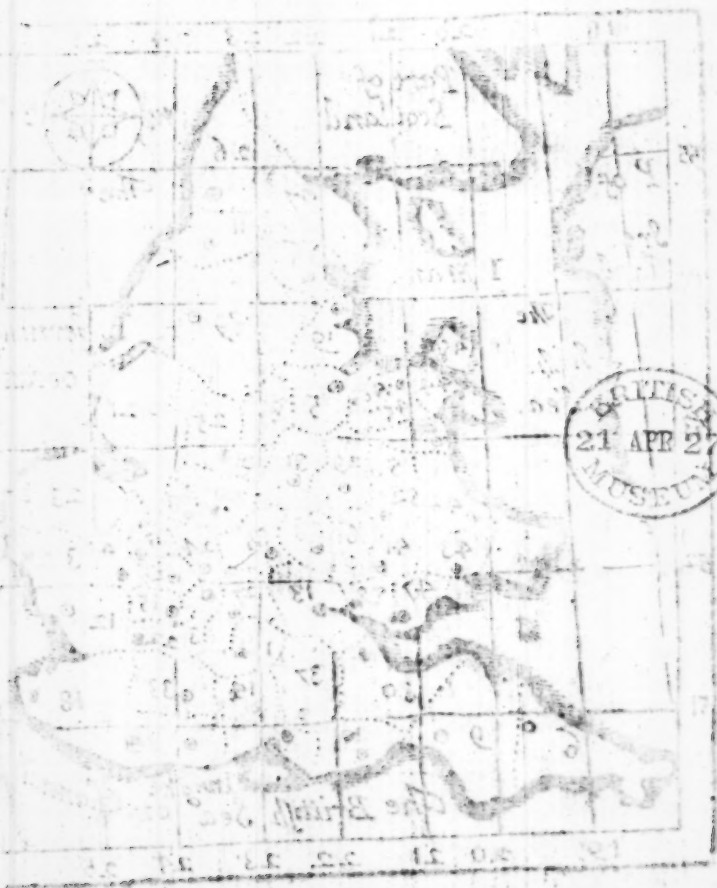
PART III.

Containing some Remarks on ENGLAND.

A Table, shewing the Number of Shires or Counties in *England* and *Wales*, and the number of Parliament Men, Cities, Hundreds, Market-Towns, and Parishes in each County, with the Length, Breadth, and Circumference of the same.

Shires or Counties.	Pa. Me.	Cities.	Hundr.	Ma. To.	Parish.	Length	Breadth.	Circu.
1. <i>Bark-shire</i>	9	0	20	12	140	40	24	
2. <i>Bedford-shire</i>	4	0	9	10	116	24	12	73
3. <i>Buckingham-shire</i>	14	0	8	15	185	39	18	138
4. <i>Cambridge-shire</i>	6	1	17	6	163	35	20	130
5. <i>Che-shire</i>	4	1	7	13	68	44	26	112
6. <i>Cornwall</i>	44	0	9	21	161	70	35	150
7. <i>Cumberland</i>	6	1	5	15	58	55	40	168
8. <i>Derby-shire</i>	4	0	6	9	106	34	26	130
9. <i>Devon-shire</i>	26	1	33	32	394	56	54	200
10. <i>Dorset-shire</i>	20	0	29	20	248	44	24	150
11. <i>Durham</i>	4	1	4	6	118	36	30	107
12. <i>Essex</i>	8	0	20	21	415	40	35	146
13. <i>Glocester-shire</i>	8	1	30	25	280	48	26	136
14. <i>Haut-shire</i>	26	1	40	16	253	46	30	154
15. <i>Hartford-shire</i>	6	0	8	11	120	27	25	130
16. <i>Hereford-shire</i>	8	1	11	8	176	26	23	102
17. <i>Huntington-shire</i>	4	0	4	6	78	20	15	100
18. <i>Kent</i>	10	2	66	30	398	60	34	162
19. <i>Lanca-shire</i>	14	0	6	26	360	57	31	170
20. <i>Leicester-shire</i>	4	0	6	13	290	28	27	196
21. <i>Lincoln-shire</i>	12	1	30	34	630	55	35	180

A New Map of ENGLAND, and WALES



A New Map of ENGLAND and WAL

Place this after Page



W A L E S.

after Page 284.



Shires or Counties.

	P.M.	Cir.	Hu.	M.T.	Par.	Len.	Bre.	Cir.
22. Middlesex	8	2	6	5	73	20	16	80
23. Norfolk	12	1	31	28	660	50	32	240
24. Northampton-shire	9	1	20	13	320	42	20	120
25. Nottingham-sh.	8	0	8	9	168	38	19	110
26. Northumberland	8	0	6	6	146	43	30	143
27. Oxford-shire	9	1	14	13	280	38	25	130
28. Rutland	2	0	5	2	48	12	10	40
29. Shrop-shire	12	0	15	16	170	35	33	134
30. Somerset-shire	18	3	29	30	385	55	40	204
31. Stafford-shire	10	1	5	18	130	40	22	131
32. Suffolk	16	0	22	29	575	40	30	140
33. Surrey	14	0	14	7	140	34	22	112
34. Sussex	20	1	65	16	312	52	20	158
35. Warwick-shire	6	1	5	13	158	33	25	135
36. Westmorland	4	0	4	8	26	36	25	120
37. Wilt-shire	34	1	29	23	304	40	30	140
38. Worcester-shire	9	1	7	11	152	35	30	130
39. York-shire	30	1	26	48	563	95	75	320
W A L E S.								
40. Anglesey	2	0	6	2	74	21	18	85
41. Brecknock-shire	2	0	6	4	61	30	26	106
42. Cardigan-shire	2	0	5	4	64	36	17	94
43. Carmarthen-shire	2	0	6	8	87	35	30	102
44. Carnarvon-shi.	2	0	7	6	68	40	20	110
45. Denbigh-shire	2	0	12	4	57	32	18	116
46. Flint-shire	2	0	5	2	28	28	16	80
47. Glamorgan-shire	2	0	10	10	118	40	22	112
48. Merioneth-shire	1	0	6	3	37	26	26	108
49. Monmouth-shire	3	0	6	7	127	24	20	80
50. Montgomery-shire	2	0	7	6	47	30	21	94
51. Pembroke-shire	3	0	7	8	145	26	26	92
52. Radnor-shire	2	0	5	4	52	24	22	90

By

By this foregoing Table of Shires, &c. it appears,

1. That the total number of Parliament Men in *England* and *Wales* are 497, which with the 16 Barons of the Cinque Ports make 513; the *English* Counties chuse Two Knights of the Shire in each, but the *Welsh* Counties chuse One, and the rest are made up of Citizens and Burgesles, that Borrough-Towns and Cities chuse, some of which follow among the Market-Towns.

2. The number of Cities in *England* are 25, Bishopricks 22, besides *Wales*, in which are 4 more.

3. The number of Hundreds in *England* and *Wales*, as computed, are 768, which are Divisions of Counties, and some Places Northward are called Wards, first appointed by King *Alfred*, (as is supposed) in order that Justice might be Administred throughout the Nation; for 10 Families make one Tything, out of whom one Man was appointed to inspect into the rest; and 10 Tythings make one Hundred, over which now there is one Man, called the Bailiff of the Hundred, for the like cause.

4. The number of Market-Towns in *England* and *Wales* are computed to be 728.

5. The number of Parishes in the same are about or near 10000, and of Villages 52000.

As for the Length, Breadth, and Compass of each County in Miles some Authors differ, which I shall leave.

The form and manner in which *England* lyeth, is here by this Map shewed, and also how each County is bounden about, and situated therein; and finding any figure in the Map, the same again find before the Names of the Shires in the Table,

Table,

Table, shews what Shire it is; and this ☉ in each, shews about what place of the Shire the Chief City or Shire-Town is seated, also to what Point of the Compass they are inclining from one another.

The cross lines in the Map may indifferently serve to shew the Longitude and Latitude of all parts of the Nation, as the figures standing in the edge at the end of the lines signifie; also the distance of Places from each other, the length of one Square is computed 60 Miles, and the breadth 37; and in this Latitude about 37 Miles East or West, makes 4 minutes of time difference, viz. 37 Miles Eastward it is Noontide 4 minutes sooner than at *London*, and 37 Miles Westward 4 minutes later, so that between *Sandwich*, and the Lands end is about half an Hour difference in the Suns coming to the Meridian.

The Length of *England* from the Lands-end in *Cornwall* to *Berwick* is said to be 389 Miles, the Length thereof under one Meridian, that is from *Calshot* in *Hampshire* to *Berwick* is 286 Miles.

The broadest place from the Lands-end to *Sandwich* is 279 Miles, the next broadest place from *Dauids* in *Wales* to *Yarmouth* is 240 Miles. The Compass thereof is accounted 1532 Miles, and to contain 29568000 Acres. The *Ile of Man* in length 28 Miles, in breadth 18, Compass 91. The *Ile of Wight* in length 22 Miles, in breadth 11, in compass 57.

The Names of the Market-Towns in every County throughout *England* and *Wales*, with the Days of the Week when the Markets are kept, and their reputed distance in Miles from *London*, according to *J. Ogilby* and others, and what Commodities each County produceth, &c. and in what Diocess or Bishoprick it is.

Bark-shire Market-Towns are,

<i>Abbingdon</i> 1	2	6	46	<i>Newberry</i>	5	47
<i>East-Isley</i>	4	44		<i>Ockingham</i>	3	28
<i>Farrington</i>	3	56		<i>Reading</i> 2	7	32
<i>Hungerford</i>	4	54		<i>Wallingford</i> 2	3	6
<i>Lambourn</i>		55		<i>Wantage</i>	7	50
<i>Maidenhead</i>	4	22		<i>New Windsor</i> 2	7	20

Chief Commodities, Sheep, Wooll, and Corn.
Salisbury Diocels.

Bedford shire Market-Towns are,

<i>Amptbill</i>	5	36	<i>Luton</i>	2	28
<i>Bedford</i> 2	3	7	<i>Potton</i>	7	37
<i>Bigliffwade</i>	4	34	<i>Shefford</i>	6	34
<i>Dunstable</i>	4	30	<i>Tuddington</i>	7	34
<i>Leighon</i>	3	33	<i>Woburne</i>	6	37

Chief Commodities, Corn, Cattel, Butter, Cheese, and Poultry. *Lincoln* Diocels.

Buck-

Buckingham-shire Market-Towns are,

<i>Alesbury</i> 2	7	33	<i>Newport-pag.</i>	7	44
<i>Amersham</i> 2	3	24	<i>Oulney</i>	2	47
<i>Beaconsfield</i>	5	22	<i>Risborough</i>	7	30
<i>Buckingham</i> p.2	7	44	<i>Stonystratford</i> p.	6	44
<i>Chesham</i> 2	4	24	<i>Wenlover</i> 2	5	30
<i>Colebrook</i>	4	15	<i>Wiccomb</i> 2	6	27
<i>Ivingo</i>	6	30	<i>Winslow</i>	5	39
<i>Marlow</i> 2	7	26			

Chief Commodities, Corn, Cattel, Wooll,
Wood, Bone-Lace. *Lincoln* Diocess.

Cambridge-shire Market-Towns are,

<i>Cambridge</i> p. 4	7	44	<i>Linton</i>	5	39
<i>Caxton</i> p.	3	42	<i>March</i>	6	67
<i>Ely</i> p.	7	57	<i>Wisbich</i>	7	75

Chief Commodities, Cheese, Butter, Corn,
Cattel, Mault, and Saffron. *Ely* Diocess.

Che-shire Market-Towns are,

<i>Altrincham</i>	3	137	<i>Nantwich</i> p.	7	126
<i>Cangleton</i>	7	123	<i>Nortwich</i>	6	125
<i>Fordsham</i>	4	140	<i>Sandbich</i>	5	125
<i>Huntsford</i>	7	128	<i>Stopford</i>	6	134
<i>Milpas</i>	2	130	<i>Tarvin</i>		139
<i>Maxfield</i>	2	124	<i>Westchester</i> p.2	4	7
<i>Middlewich</i>	7	128			140

Chief Commodities, Cheese, Corn, Cattel,
Sheep, Fish, Fowl, Salt, and Mill-stones. *Chester*
Diocess.

Cornwall Market-Towns are,

<i>Bodmin</i> 2	7	193	<i>Liskard</i> 2	7	180
<i>Camelford</i> 2	6	184	<i>Lyfthiel</i> 2	6	190
<i>S. Columb</i>	5	200	<i>Market Jewp</i>	5	228
<i>Fowey p.</i> 2	7	292	<i>Padstow</i>	7	194
<i>Falmouth</i> 2	4 7	214	<i>Penryn</i> 2	4 7	223
<i>S. Germain</i>	6		<i>Penzance</i>	5	230
<i>Grampond</i> 2	7	206	<i>Saltsb</i> 2	7	181
<i>Helston</i> 2	7	228	<i>Stratton</i>	3	174
<i>S. Ives</i> 2	4 6	229	<i>Tregney</i> 2	2	209
<i>East Looe p.</i> 2	7	196	<i>Truroe</i> 2	4 7	214
<i>Launston</i> 2	7	175			

Chief Commodities, Tin, Copper, Fish,
and Fowl. *Exeter Diocels.*

Cumberland Market-Towns are,

<i>Abby Holm</i>	7	231	<i>Keswick</i>	7	218
<i>Aston Mere</i>	7		<i>Kirkswild</i>	5	210
<i>Bootle</i>	4		<i>Long-town</i>	5	234
<i>Brantton</i>	3	225	<i>Penrith</i>	3	221
<i>Carlisle p.</i> 2	7	233	<i>Ravenglass</i>	7	214
<i>Cockermouth</i> 2	2	226	<i>White-baven</i>	5	227
<i>Egremont</i>	7	222	<i>Wigton</i>	3	229
<i>Ireby</i>	5	225			

Chief Commodities, Sheep, Copper, Fish, Fowl,
Cloth, Sea-coals, &c. *Chester and Carlisle Dioc.*

Derby-shire Market-Towns are,

<i>Alfreton</i>	2	100	<i>Derby p.</i> 2	6	98
<i>Ashburn</i>	7	108	<i>Dronfield</i>	5	112
<i>Bakewell</i>	2	115	<i>Tidesdale</i>	4	120
<i>Bolsover</i>	6	104	<i>Wirksworth</i>	3	107
<i>Chesterfield</i>	7	106			

Chief

Chief Commodities, Iron, Lead, Coal, Marble, Free-stone, and Mill-stones. *Litchfield* and *Coventry* Dioceses.

Devon-shire Market-Towns are,

<i>Ashburton</i> p. 2	7	153	<i>Houlsworthby</i>	7	169
<i>Axminster</i>	7	120	<i>Ilfracomb</i>		152
<i>Barnstable</i> 2	6	154	<i>Kingsbridge</i>	7	170
<i>Bediford</i>	3	161	<i>Medbury</i>	5	170
<i>Braunich</i>		135	<i>Morton</i>	7	150
<i>Chidley</i>	7	146	<i>South-molten</i>	7	146
<i>Chulmleigh-bow.</i>	5	149	<i>Newton-Abb.</i>	4	152
<i>Columpton</i>	7	134	<i>Okehampton</i> 2	7	158
<i>Comb Martin</i>		194	<i>Ottery</i>	3	133
<i>Crediton</i>	7	147	<i>Plimouth</i> p. 2	2 5	173
<i>Culliton</i>	5	125	<i>Plimton</i> 2	7	178
<i>Dartmouth</i> 2	6	165	<i>Sidemouth</i>		130
<i>Dolbrook</i>	4	170	<i>Tavestoke</i> 2	7	158
<i>Exeter</i> p. 2	4 6	138	<i>Tiverton</i> 2	3	136
<i>Hatherly</i>	6	160	<i>Torrington</i>	7	158
<i>Honiton</i> 2	7	126	<i>Torres</i> 2	7	160

Chief Commodities are Tin, Lead, Kerfies, Serges, Bone-lace, &c. *Exeter* Diocesis.

Dorset-shire Market-Towns are,

<i>Abbsbury</i>	5	105	<i>Everiswit</i>	3	105
<i>Bemister</i>	5	110	<i>Frampton</i>	5	102
<i>Blanford</i>	7	85	<i>Lime</i> p. 2	5	120
<i>Bridport</i> 2	7	115	<i>Melcomb Reg.</i> 2	6	105
<i>Cerne-Abbas</i>	5	105	<i>Mildleton</i>	2	91
<i>Corf-Castle</i> 2	5	93	<i>Poole</i> 2	2 5	86
<i>Cranebourn</i>	4	76	<i>Shaftsbury</i> p. 2	7	88
<i>Dorchester</i> p. 2	7	97	<i>Sherborn</i>	4	100

(290)

<i>Sturminster.</i>	5	94	<i>Weymouth 2</i>	3	6	104
<i>Warham 2</i>	7	90	<i>Wimborn-Minſt.</i>	6	82	

Chief Commodities, are Cattel, Sheep, Corn, Wood, Cloth, &c. *Bristol* Diocels.

Durham Market-Towns are,

<i>Ankeland</i>	5	188	<i>Darlington p.</i>	2	185
<i>Barnards Caſtle</i>	4	187	<i>Staintborp</i>	1	190
<i>Durham p. 2</i>	7	200	<i>Sunderland</i>	6	200

Chief Commodities, are Sea-coals, Leads, Iron, and Fiſh. *Durham* Diocels.

Effex Market-Towns are,

<i>Barking</i>	7	7	<i>Hatfield</i>	7	25
<i>Billerakey</i>	3	20	<i>Haulſtead</i>	6	39
<i>Braintree</i>	4	34	<i>Horndon</i>	7	21
<i>Brentwood p.</i>	5	15	<i>Malden 2</i>	7	32
<i>Chelmsford p.</i>	6	45	<i>Mayntree p.</i>	3	31
<i>Chipping-ongar</i>	7	19	<i>Raleigh</i>	7	30
<i>Cogſhall</i>	7	36	<i>Rumford p.</i>	4	10
<i>Colcheſter p. 2</i>	7	43	<i>Thaxted</i>	6	35
<i>Dunmore</i>	7	31	<i>Walden</i>	7	35
<i>Epping</i>	6	15	<i>Waltham-Abby</i>	3	12
<i>Harwich p. 2</i>	3	60			

Chief Commodities, are Cloth, Stuffs, Hops, Bacon, Saffron, Oyſters, &c. *London* Diocels.

Gloceſter-ſhire Market-Towns are,

<i>Blackley</i>	4	89	<i>Civenceſter 2</i>	2	6	70
<i>Campton</i>	4	67	<i>Dean magna</i>	2	90	
<i>Cheltenham</i>	5	77	<i>Dursley</i>	5	84	
<i>ChippingSudbury</i>	3	77	<i>Fairford</i>	5	62	

Gloce

Glocester p. 2	4	7	82	Stow on the wou.	5	67
Horton	6	83	Stroud	6	78	
Lecklad p.	3	60	Tewksbury 2	4	779	
Leonards-Stanly	7	82	Tedbury	4	77	
Marsh-field	3	84	Thornbury	7	89	
Mincingbampton	3	77	Wickware	3		
Newent	6	89	Winchcomb	7	72	
Newham	6	90	Wotton	6	83	
Panwick	3	78				

Chief Commodities, are Corn, Timber, Cheefe, Wooll, Cloth, Sider, Perry, and Steel. Gloucester Diocels,

Hamp-shire Market-Towns are,

Alreßon	5	46	Newport in Wi. 2	4	772
Alton p.	7	38	Petersfield p. 2	7	45
Andover p. 2	7	55	Portsmouth p. 2	5	760
Basingstoke p.	4	39	Ramsay	7	55
Christchurch 2		80	Ringwood	4	75
Kings-clear	3	45	Southampton p. 2	3	562
Lemington 2	7	72	Whitchurch 2		94
Odiam	7	34	Winchester p. 2	4	754

Chief Commodities, are Corn, Cattel, Iron, Wooll, Honey, and Kerfies. Winchester Diocels.

Hartford-shire Market-Towns are,

S. Albans p. 2	7	20	Hempsted	5	22
Baldock	5	29	Hatfield	5	17
Barnet p.	2	10	Hodsdon	5	17
Bishopsstaford	5	27	Hitching	3	30
Berkhamsted	2	24	Rickmansworth	7	17
Buntingford	2	28	Stevenage	6	25
Hartford 2	7	21	Stondon	6	23
			Tring		

Tring	6	28	Ware	3	20
Watford	3	15	Roydon p.	4	34

Chief Commodities, are Wheat, Barley, and Mault. *London and Lincoln Dioceses.*

Hereford-shire Market-Towns are,

Bramyard	2	96	Lidbury	3	90	
Hereford p. 2	4	7	101	Pembridg	3	108
Kington	4	114	Ross	5	91	
Lemster 2	6	104	Webley 2	5	108	

Chief Commodities, are Sider, Corn, Wood, Sheep, and is said to be the best Wooll, called *Lemster-wooll.* *Hereford Dioceses.*

Huntington-shire Market-Towns are,

Huntington p. 2	7	49	S. Neots	5	41
S. Ives	2	49	Ramsay	4	55
Kimbolton	6	47	Taxley	3	59

Chief Commodities, are Corn, and Cattel. *Lincoln Dioceses.*

Kent Market-Towns are,

Appledore		54	Fokestone	5	62
Ashford	7	41	Gouldhurst	4	40
Bromley	5	7	Gravesend p.	4	7 20
Canterbury p. 2	4 7	46	Hithe p. 2 c.	7	48
Cranebrook	7	44	Lenham	3	40
Cray	4	13	Lidd	5	63
Dartford p.	7	14	Maidstone 2	5	28
Dover p. 2 c.	4 7	55	Malling	7	25
Eltham	2	48	Milton	7	37
Faversham	4 7	44	Rocheſter p. 2	6	27

Rumney

Runney 2 c.	5	61	Tunbridge	6	28	
Sandwich p. 2 c.	4	7	60	Westram	4	20
Sevencke	7	20	Woolwich	6	8	
Smarden	6	42	Wrotham	3	20	
Tenderden	6	50	Wye	5	49	

Chief Commodities, are Corn, Fruit, Oysters.
Canterbury and Rochester Dioceses.

Lanca-shire Market-Towns are,

Blackbourn	2	154	Kirkham	3	162	
Bolton	2	146	Lancaster p. 2	7	188	
Bury	5	143	Leigh		145	
Cartmell	2	192	Liverpool 2	7	150	
Chorley	3	154	Manchester p.	7	138	
Clithro 2	7	158	Ormeskirk	3	156	
Coln	4	153	Prescot	2	147	
Dalton	7	200	Preston p. 2	4	7	160
Eccleston		154	Poulton	2	168	
Gastling	5	170	Reckdale	3	145	
Haslingdon	4	150	Ulverston	5	197	
Hawshead	2	202	Warrington p.	4	140	
Hornby	2	170	Wigan 2	2	6	148

Chief Commodities, Coal, Cattel, Fish,
Fowl, and Flax. Chester Diocess.

Leicester-shire Market-Towns are,

Ashby de la zouc	7	89	Leicester 2	7	78
Billesden	6	72	Loughborough	5	86
Bosworth	4	83	Lutterworth	5	71
Hallaton	5	68	Melton Mowbray	3	75
Harborough	3	66	Ment Sorrell	2	81
Hinchley	2	79	Waltham Would	5	76

Chief

Chief Commodities, are Corn, Cattel, and Wooll. Near *Bosworth* King *Richard* the Third was Slain in Battel. *Lincoln* Diocess.

Lincoln-shire Market-Towns are,

<i>Alford</i>	3	107	<i>Gainsburgh</i>	3	115
<i>Barton</i>	2	130	<i>Lincoln</i> p. 2	6	102
<i>Binbrook</i>	4	115	<i>Louth</i>	4	7 112
<i>Boston</i> p. 2	7	90	<i>Market Rasen</i>	3	114
<i>Bourn</i>	7	75	<i>Market Deeping</i>	5	70
<i>Burgh</i>	5	104	<i>Navenby</i>	5	
<i>Burton</i>	3	127	<i>Spilsby</i>	2	100
<i>Bullingbrook</i>	3	100	<i>Saltfleet</i>		115
<i>Croland</i>		72	<i>Sleaford</i>	2	88
<i>Dennington</i>	7	84	<i>Spalding</i>	3	78
<i>Folkington</i>	5	83	<i>Stamford</i> p. 2	2	6 70
<i>Glamford</i>	5	122	<i>Stanton</i>	2	109
<i>Grantham</i> p. 2	7	85	<i>Tatershall</i>	6	98
<i>Grimsby</i> ma.p. 2	4	124	<i>Thongcast</i>	7	
<i>Holbich</i>	5	84	<i>Wainfleet</i>	7	102
<i>Horn Castle</i>	7	102	<i>Wragby</i>	5	
<i>Kirton</i>	7	117			

Chief Commodities, are Wooll, Cattel, Fish, Fowl, and Horses. *Lincoln* Diocess.

Middlesex Market-Towns are,

<i>Brentford</i>	3	8	<i>Stanes</i> p.	6	15
<i>Edgworth</i>	5	10	<i>Uxbridge</i>	5	15
<i>Enfield</i>	7	10			

Chief Commodities, are Corn, Cattel, and Fruit. *London*, the Chief City or Metropolis of the Nation, being in this County, but not properly of it; but it and *Westminster* being Cities

and
Third
e,
Cities distinct, having in them, and the Liberties thereof, 120 Parishes, as appears by the Weekly Bills of Mortality; in, and about which Cities are 15 Markets, namely,

Westminster	Honey-lane or	
Hungerford	Milk-street	
James's	Stocks	
Bloomsbury	Leaden-hall	
Brooks	Spittle-field	
Clare	Shadwell	
Covent-garden	And Billingsgate	
Smithfield	for Fish	
Newgate		

London Diocess.

Norfolk Market-Towns are,

115	A'esham p.	7	99	Holt	7	79
102	Attleburgh p.	5	80	Lynn Reg. p. 2	3	7
112	Buckenham	7	79	Norwich p. 2	4	7
114	Burnham	7	90	Repham	7	92
70	Caston	3	97	Sechey 1 in 2 w.	2	72
100	Cromer	7	102	Snetsham	6	82
115	E. Dearham	6	83	Swaffham	7	77
88	Dis	6	76	Thetford p. 2	7	70
78	Downham p.	7	69	Watton	4	74
70	Fakenham	5	85	Walsingham	6	89
109	Foulsham	3	90	N. Walsham	5	100
98	E. Harling	3	75	Worsted	7	98
	Harleston	4	82	Wymundham p.	6	85
	Kingham	7	80	Yarmouth p. 2	7	92

Fish,
and
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eing
ities
Chief Commodities, are Stuffs, Stockings, Wooll, Corn, Fish, and Conies. Norwich Diocess.

Nor-

Northampton-shire Market-Towns are,

<i>Brackley</i> 2	4	48	<i>Peterburrong</i> p. 2	7	62
<i>Daventry</i> p.	4	60	<i>Rockingham</i>	5	62
<i>Higham-ferris</i> 1	7	51	<i>Rotwell</i>	2	58
<i>Kettering</i>	6	57	<i>Thrapston</i>	3	53
<i>Kings-cliff</i>	3	59	<i>Toucester</i> p.	3	50
<i>Northampt.</i> p. 2	7	54	<i>Wallingborough</i>	4	52
<i>Oundle</i>	7	56			

Chief Commodities, are Corn, Cattel, Sheep, Wood, and Shoes from *Northampton*. *Peterborough* Diocess.

Northumberland Market-Towns are,

<i>Alnewick</i> p.	7	238	<i>Morpeth</i> p. 2	4	224
<i>Berwick</i> p. 2	7	262	<i>Newcastle</i> p. 2	3	7
<i>Hexam</i>	3	226	<i>Wooler</i>	5	239

Chief Commodities, are Sea-coal, Fish, Fowl, and Salt. *Berwick* is not properly in this County, but lies between it and *Scotland*.

Nottingham-shire Market-Towns are,

<i>Bingham</i>	5	86	<i>Kedford</i> 2	7	110
<i>Blyth</i>	5	116	<i>Southwel</i>	7	94
<i>Mansfield</i>	5	98	<i>Tuxford</i> p.	2	105
<i>Newark</i> p. 2	4	95	<i>Norkfop</i>	4	110
<i>Nottingham</i> 2	4	96			

Chief Commodities, are Pit-coal, Corn, Wood, Fish, Fowl, and Liquorice. *York* Diocess.

Oxford-

Oxford-shire Market-Towns are,

Bampton	4	56	Henley	5	29
Banbury p. 1	5	53	Oxford p. 4	4	747
Bislow		43	Wame	3	37
Burcheſter	6	45	Watlington	7	36
Burford	7	62	Wisney	5	54
Chipping-norton	4	59	Woodſtock 2	3	51
Deddington	7	51			

Chief Commodities, are Corn, Cattel, Wood, Fruit, and Mault. *Oxford Diocels.*

Rutland Market-Towns are,

Okeham	1	7	172	Uppingham	1	4	64
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Chief Commodities, are Corn, Cattel, Wooll, and Wood. *Peterburrongh Diocels.*

Shrop-shire Market-Towns are,

Bishops-Caſtle	2	6	115	Oſweſtree	2	130		
Bridgnorth	2	7	100	Shrewsbury p.	2	4	6	118
Clebury	4	98	Shipton	3	110			
Draiton	4	118	Stretton	5				
Elſmere	3	127	Wenlog-mag.	2	2	105		
Hales-aven	2	90	Wem	5	121			
Ludlow p.	2	2	105	Whitchurch p.	6	126		
Newport	7	112	Willington	5	111			

Chief Commodities, are Wheat, Barley, Wood, Cattel, Iron, and Pit-coal. *Hereford, Liſchfield, and Diocels.*

Somerset-shire Market-Towns are,

Axbridg	5	105	Ilminster	7	113		
Baibe p. 2	4	7	87	Langport	7	109	
Bridgwater 2	5	116	Norib Pedderton	3	114		
Bristol p. 2	4	7	97	South Pedderton	5	109	
Bruton	7	93	Pensford	3	94		
Canesham	5	95	Phillips-norton	5	84		
Chard	2	116	Somerton	2	105		
Crookthorn p.	7	110	Shepton-mallet	6	92		
N. Curry.	3	7	114	Taunton p. 2	4	7	120
Dulverton	7	136	Watchet	7	126		
Dunster	6	130	Wells p. 2	4	7	96	
Evill	6	108	Wellington	5	124		
Frowmselwoo.	4	85	Wincaunton	4	93		
Glastenbury	3	103	Wivescomb	3	128		
Ilchester 2	4	104	Winton	3	103		

Chief Commodities, are Corn, Cattel, Lead, Bristol Stones, Broad-cloths, &c. *Baibe* and *Wells*. Diocess.

Stafford-shire Market-Towns are,

Betels	3	120	Pankridg	3	100	
Brewood	3	101	Ridsley	3	109	
Burton on Trent	5	96	Stow p.	3	107	
Checkley	5	110	Stafford 2	7	104	
Eccleshall	6	110	Tamworth 2	7	89	
Leek	4	116	Tutbury	3	99	
Litchfield p. 2	3	6	94	Utoxiter	4	104
Newcastle 2	2	116	Walsall	3	92	
Pagers Bromly	3		Wolverhampton	4	98	

Chief Commodities, are Copper, Iron, Lead, Alabaster, and Pit-coal. *Litchfield* and *Coven-*
try Diocess. *Suffolk*

Suffolk Market-Towns are,

113	Alberrough 2	7	76	Lavenham	3	22
109	Aye 2	7	74	Fremlingham	7	74
114	Bectles p.	7	92	Leftaff	4	94
109	Bildestow	4	54	Meadleshham	3	65
94	Budfdale	5	75	Middenhall	6	57
84	Bungey	5	85	Needham	4	61
105	Bury p. 2	4	60	Newmarket p. 2	3	55
92	Clare	6	50	Veyland	6	47
120	Debenham	6	68	Orford 2	2	73
126	Dunwich 2	7	82	Saxmundham	5	75
96	Halesworth	3	83	Sowley	5	
124	Hadley	2	53	Stow-market	5	60
93	Haverill	4	43	Sudbury 2	7	46
128	Ikefworth	6	64	Woodbridg	4	66
103	Ipswich p. 2.	4	760			

Lead, Chief Commodities, are Butter, Cheese,
and Linnen, and Woollen-cloth. Norwich Diocels.

Surrey Market-Towns are,

e,	Croydon	7	10	Guilford p. 2	7	25
100	Darling	5	20	Kingston	7	10
109	Ewell	5	12	Rygate 2	3	20
107	Farnham	5	31	Southwark 2	24	67

104 Chief Commodities, are Corn, Box, Fullers-
7 89 earth, and Nuts. Winchester Diocels.

Suffex Market-Towns are,

4 98	Arundel p. 2	4	746	Cuxfield	6	34
3 92	Battel	5	48	E. Grinstead 2	5	25
Lead,	Betworth	4	39	Hastings 2 c.	4	754
Toven-	Chichester p. 2	4	750	Helmston	5	44
Suffolk		P 2				Hor-

(300.)

Morham 2.	7	28	Stening 2.	4	40
Lewis 2	7	40	Stovington	4	
Midhurst 2	5	42	Tarring	7	45
Rye p. 2 c.	4	7	Winchelsey 2 c.		

Chief Commodities, are Corn, Wood, Wooll, Iron, and Mault. *Chichester* Diocess.

Warwick-shire Market-Towns are,

Atherston	3	84	Nuncaton	7	81
Aulcheffer	3	72	Rugby	7	67
Bromicham	5	88	Sowtham	2	64
Colshill p.	4	82	Stratford p.	5	76
Covenry p. 2	6	74	Sutton Coesfield	2	88
Hanley	2	72	Warwick p. 2	7	67
Kyneton	3	61			

Chief Commodities, are Cattel, Corn, Wood, Wooll, Iron, Knives, &c. Mault, and Cheese. *Litchfield* and *Worcester* Diocess.

Westmoreland Market-Towns are,

Amblefide	4	206	Kendall p.	7	196
Appleby 2	7	197	Kirby Laundal	5	185
Burgh	4	191	Kirby Stevens	6	188
Burton	3	188	Orton	4	194

Chief Commodity, is Cloth. *Chester* and *Carlisle* Diocess.

Wilt-shire Market-Towns are,

Amersbury	6	65	Chipnam p. 2	7	77
Auburn	3	56	Greeklad 2	7	65
Bradford	2	83	Devizes p. 2	5	72
Calne 2	3	72	Dunston 2	6	96

High

(301)

Highworth	4	60	Swindon	2	62
Hindon 2	5	80	Sundon	2	
Lavington	4	73	Troubridg p.	7	80
Malmsbury 2	7	74	Warminster	7	80
Marlborough p. 2	7	62	Westbury 2	6	80
Mere	2	87	Wilton 2	4	72
Ramsbury	3	60	Wotton-basset 2	3	66
Salisbury p. 2	3	7	70		

Chief Commodities, are Wooll, Wood, Sheep,
and Cloth. *Salisbury Diocels.*

Worcester-shire Market-Towns are,

Broomsgrave	3	82	Shipton	7	82
Bewdly 1	7	92	Sturbridg	6	90
Droitwich 2	6	82	Tenbury p.	3	100
Evesham p. 2	2	73	Upton	5	83
Kedderminster	5	39	Worcester p. 2	4	78
Presbore	3	179			

Chief Commodities, are Salt, Sider, Perry,
and Hops. *Worcester Diocels.*

York-shire being the Largest County in
England, and is divided into Three
Parts, called Ridings; the Market-
Towns in each are as followeth.

East Riding.			Kilham	5	154
			Pocklington	7	152
Beverly 2	7	141	Wighton	4	147
Burlington p.	7	160			
Heaton 2	7	141	West-Riding.		
Howden	7	139			
Hull p. 2	3	7	Bartrey. P.	7	119
			P. 3		Barnsby

Barnsby	4	126	Wetherby	5	145		
Borough-br.p. 2	7	162					
Bradford	5	145	North Riding.				
Doncaster P.	7	123					
Hallifax	5	140	Askrigg	3	175		
Knarsborough 2	4	140	Abberforth	4	139		
Leeds p.	3	7	139	Bedal	3	167	
Oteley	3	146	Gisborough	2	183		
Pontfract 2	7	133	Helmley	7	166		
Ripley	6	152	Kirbymoorside	4	167		
Rippon 2	5	158	Malton 2	7	162		
Rotherham	2	117	Masnam	3	165		
Selby	2	141	Northallerton.p.2	4	176		
Settley	3	165	Pickering	2	170		
Sheffield	3	115	Richmond 2	7	175		
Sherbourn	7	137	Scarborough 2	5	189		
Skipton p.	7	155	Stokesley	7	179		
Snarthe	6	136	Thruske 2	2	162		
Tadcaster p.	5	142	Whitby p.	7	173		
Tickhill	7	115	Warum	5	176		
Wakefield	5	6	133	York p. 2	5	7	150

Chief Commodities, are Cloth, Corn, Cat-
tel, Edg-tools, Spurs, &c. York Diocess.

Counties in WALES.

Anglesey Isle Market-Towns are,

Baumanricep. 1 4 | 184 | Newlurge | 3 | 190 |

Chief Commodities, are Cattel. Bangor
Diocess.

Brecknock-shire Market-Towns are,

Bealt. 2 7 | 125 | Coecowell | 5 | 114 |

Brecknock. 1 4 7 | 122 | Eley | 2 | 116 |

Chief

Chief Commodities, are Cotton, Corn, Cattel, Fish. *Landaff Diocess.*

Cardigan-Market-Towns are,

<i>Aberystwith</i>	2	145	<i>Lanbedar</i>	3	146
<i>Cardigan p. 1</i>	7	162	<i>Tregeron</i>	5	140

Chief Commodities, are Corn, Cattel, Fowl, Fish, and Lead. *S. David's Diocess.*

Carmarthen-shire Market-Towns are,

Carmarthen	4	7	156	Lanely	3	157
Kidwellyn	3	157	Langsdoek	5	140	
Lancbern	6	164	Lanymdiffry	P. 4	7	137
Landilonawre	3	130	Newcastle	6	156	

Chief Commodities, are Corn, Cattel, Salmon, and Pit-coal. *S. David's Diocess.*

Carnarvan-shire Market-Towns are,

<i>Aberconway</i>	6	174	<i>Creketh</i>	4	171
<i>Bangor</i>	4	180	<i>Newin</i>	7	180
<i>Carnarvan</i>	7	186	<i>Pulbelly</i>	4	177

Chief Commodities, are Cattel, Sheep, Fish, and Fowl. *Bangor Diocess.*

Denbigh-shire Market-Towns are,

<i>Denbigh</i>	4	160	<i>Ruthen</i>	2	150
<i>Llanost</i>	3	165	<i>Wrexham</i>	2	138

Chief Commodities, are Sheep, Goats; here are many Mountains. *S. Asaph Diocess.*

Flint-shire Market-Towns are,

<i>S. Asaph</i>	7	162	<i>Holy-well</i>	7	
<i>Cajervis</i>	3	155			

Chief Commodities, are Butter, Cheese, Honey, Pit-coal, and Lead-ore. *S. Asaph* Diocess.

Glamorgan-shire Market-Towns are,

<i>Aberavon</i>	7	150	<i>Landaff</i>		123	
<i>Bridgend</i>	7	135	<i>Lantriffent</i>	6	127	
<i>Caerphilly</i>	5	122	<i>Neath</i>	7	144	
<i>Cardiff p. 1</i>	4	7	<i>Penrife</i>	5	155	
<i>Cowbridge</i>	3	131	<i>Swansey p.</i>	4	7	146

Chief Commodities, are Corn, Cattel, Sheep. *Landaff* Diocess.

Merioneth-shire Market-Towns are,

<i>Bala</i>	7	145	<i>Harlech</i>	7	161
<i>Delgelbe</i>	3	155			

Chief Commodities, are Sheep, Fish, Fowl, and Cotton. *Bangor* Diocess.

Monmouth-shire Market-Towns are,

<i>Abergavenny</i>	3	111	<i>Newport</i>	7	115	
<i>Caerlion</i>	5	112	<i>Pont Pool</i>	7		
<i>Cheapstow</i>	7	102	<i>Uske</i>	2	6	108
<i>Monmouth 1.</i>	7	100				

Chief Commodities, are Cattel, Corn, and Sheep. *Landaff* Diocess.

Montgomery-shire Market-Towns are,

<i>Llanidloes</i>	7	131	<i>Montgomery</i>	1	5	120
<i>Llanuwilling</i>	5	132	<i>Newtown</i>		3	123
<i>Machynlleth</i>	2	139	<i>Welsh Pool</i>		2	125

Chief Commodity, is Horses. S. *David's* Diocess.

Pembroke-shire Market-Towns are,

<i>S. Davids</i>		186	<i>Newport</i>		7	166
<i>Fishgard</i>	6	170	<i>Pembroke</i>	1	7	172
<i>Haverford</i>	3	7	<i>Tenby</i>		4	7
<i>Kilgarren</i>	4	160	<i>Wiston</i>		7	173
<i>Narbeth</i>	4	168				

Chief Commodities, are Pit-coal, Fish, and Fowl. S. *David's* Diocess.

Radnor-shire Market-Towns are,

<i>Knighton</i>	5	114	<i>Radnor</i>	1	5	115
<i>Prestain</i>	7	111	<i>Riaderguy</i>		4	125

Chief Commodities, are Cheese, and Horses. *Hereford* Diocess.

An Explanation of the Particulars in each foregoing County or Shire.

1. Under the Name of every County is the Names of the Market-Towns therein in an Alphabetical order, and that City or Town with a different Letter, is the chief City, or Shire-Town.

2. After the Names of some of the Towns is p. which signifies a Post-Town: Here note the

the General Post-Office is kept in *Lombard-street, London*; and from thence Letters are dispatched, on the second day of the Week to *France, Spain, Italy, Sweedland, Denmark, Germany, and Flanders*; on the third day to *Holland, Germany, Sweedland, Denmark, Ireland, Scotland*, all parts of *England and Wales*; on the fifth day to *France, Spain, Italy*, all parts of *England and Scotland*; on the sixth day to *Italy, Germany, Flanders, and Holland*; on the seventh day to all parts of *England, Scotland, Wales, and Ireland*; every day into *Kent and the Downs*.

Letters are returned from all parts of *England and Scotland* every second, fourth, and sixth day of the Week; from *Wales* on the second, and sixth days; a single Letter, not exceeding a Sheet of Paper, is carried 80 Miles, and under, for Two Pence, a double Letter for Four Pence; but exceeding 80 Miles, a single Letter is Three Pence, a double Letter is Six Pence, an Ounce a Shilling. This manner of conveyance of Letters by Post, is by night and day; so that in 24 hours the Post goes 120 Miles, which is Five Miles an hour.

3. Also after some of the Towns Names is placed a Figure, and for the most part is 2, shewing, that that Town chuseth so many Parliament Men: And because there are some that chuse them, not being Market-Towns, therefore they are omitted, which here I have inserted, each chusing two. In *Cornwall* 6. *Bashney, Calington, S. Maws, Michaels, Newport, Westlooe*. *Devon-shire* 1. *Beralston*. *Hant-shire* 3. *Newtown, Stock'ridg, Yarmouth*. *Kent* 1. *Quinborough*. *Lanca-shire* 1. *Newtown*. *Mid-*
dlesex

Essex 2. London 4, Westminster. Norfolk 1. Castle-rising. Nottingham 1. East-redford. Somerset 2. Milburn-port. Minhead. Surrey 3. Bleckingly, Gatton, Haslemere. Sussex 3. Bramber, Seaford c. Shoreham. Wilts 4. Bedwin, Heytersbury, Lungefball, Old Sarum. York-shire 1. Alborough. Those Towns with c. in Kent and Sussex, are Cinque-ports.

4. In the next Column is the Figures for the days of the Week on which the Markets are kept; as 2 for second day, &c. some of them have two Markets weekly.

5. In the last Column of Figures is the computed distance in Miles from the said Towns to London.

6. And after the Names of the Markets, is shewed the Chief Commodities that that County produceth.

So in short, this Nation produceth, 1. For Minerals, &c. Tin, Copper, Iron, Lead (some say) Silver, Sea-coal, Pit-coal, Fullers-earth, Free-stone, Mill-stones, Whet-stones, Marble several sorts of Colours, &c. 2. For Grain, Wheat, Barley, Rye, Oats, Pease, Beans, &c. 3. For Fruit, Apples, Pears, Plumbs, Apricocks, Quinces, Cherries, Nuts, &c. 4. For Wood, Oak, Ash, Elm, Beech, &c. 5. For Herbs and Roots, both for Food and Physick, abundance; Saffron, Flax, Hemp, Hops, &c. 6. For Beasts, Kine, Horses, Sheep, Swine, Deer, &c. 7. For Fowl, both tame and wild; and Fish of divers sorts. 8. For Commodities or Manufactures, wherewith a Trade is maintained with other Nations, as Woollen-cloaths of sundry sorts and prizes; Bays, Says, Cottons, Serges, Kerfies, Moccadoes, Velvets, Plushes, Callimancoes, Worstedes

Workeds several sorts, Fustians, Linnen-cloth, Furs, Calve-skins, Sheep-skins, Hides, Paper, Tin, Lead, Iron, Beer, Ale, Sider, Grain, Fish, Cheese, Butter, Hops, Honey, VVax, Gunpowder, Saffron, Liquorice, Copperas, and much more; so that this Nation may be termed the Store-house of *Europe*, being mightily replenished with the Blessings of the Lord, for which the Inhabitants thereof are deeply obliged to render unto the Giver due Obedience and Thanksgiving, who is VVorthy for ever.



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